OPERATING INDUSTRIES

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FILED
SEP 16 1991
CLERK, U.S. DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
DEPUTY

ENTERED
CLERK, U.S. DISTRICT COURT
SEP 17 1991
CENTRAL DISTRICT OF CALIFORNIA
DEPUTY
BY

UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

UNITED STATES OF AMERICA, et al., Plaintiffs, v. CHEVRON CHEMICAL CO., et al., Defendants.	No. CV 88 7196 MRP(Kx) (~~PROPOSED~~) ORDER GRANTING MOTION OF PLAINTIFFS TO ENTER AND AMEND SECOND PARTIAL CONSENT DECREE

Based upon the plaintiffs United States' and State of California's motion and supporting memorandum, and such other memorandum, evidence and argument, if any, filed or submitted in response to said motion; and the Court otherwise being advised;

IT IS ORDERED that:

The motion to enter the Second Partial Consent Decree is granted, and that the Decree is amended to include the signature pages of Decalta Oil Co. and Indal Inc. (attached hereto as Exhibit 1), revised Exhibit B, Schedule of Payment 1 (attached hereto as Exhibit 2) and revised Exhibit C (attached hereto as Exhibit 3).

DATED: SEP 16 1991

MARIANA R. PFAELZER
UNITED STATES DISTRICT JUDGE

Prepared by:

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U.S. Department of Justice

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EXHIBIT 1

The undersigned Defendant hereby consents to the forego: Second Partial Consent Decree concerning the Operating Industries, Inc. site.

FOR DEFENDANT: DECALTA INTERNATIONAL CORPORATION

DATED: March 8, 1991

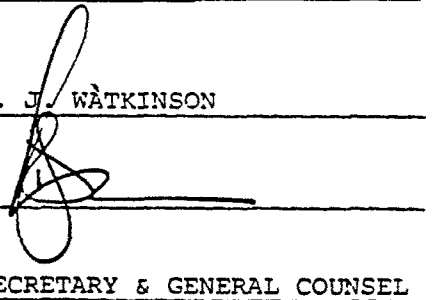
BY:

Name: LORNE B. GORDON

Signature: 

Title: PRESIDENT

Name: D. J. WATKINSON

Signature: 

Title: SECRETARY & GENERAL COUNSEL

The undersigned Defendant hereby consents to the foregoing Second Partial Consent Decree concerning the Operating Industries, Inc. site.

FOR DEFENDANT: INDAL INC. (successor to ROYAL ALUMINUM, IN

DATED: 10 MAY 1991

BY: [signature]

Name: ROBERT B. LECKIE

Signature: [signature]

Title: SECRETARY

EXHIBIT 2

Exhibit-B
Operating Industries, Inc.
Schedule of Payment-1

	Generator	EPA Payment	State Payment
	AMERICAN PETROFINA	$154,117	$1,340
*	AMERITONE PAINT CORP. / TREWAX CO.	$355,038	$3,087
*	AMTRAK - NATIONAL RR PASSENGER CO.	$132,532	$1,152
	ARMSTRONG CORK CO.	$79,441	$691
*	B & C PLATING CO.	$232,017	$2,018
*	BEHR PROCESSING	$134,952	$1,173
*	BERNARD EPPS AND CO.	$164,574	$1,431
*	BERWIND RAILWAY SERVICE CO.	$154,024	$1,339
	BIRD AND SON INC.	$70,192	$610
*	BLACKTOP MATERIAL CO.	$153,128	$1,332
*	CAPITOL METALS CO., INC.	$107,663	$936
	CHROME CRANKSHAFT	$80,130	$697
	CLOUGHERTY PACKING	$163,809	$1,424
*	CONTAINER CORPORATION OF AMERICA	$271,744	$2,363
*	COOPER AND BRAIN OIL CO.	$138,118	$1,201
	CROWN ZELLERBACH	$97,640	$849
	DECALTA OIL CO.	$123,591	$1,075
	DEUTSCH CO.	$97,082	$844
	DIAL CORP.	$2,653	$23
*	EKCO PRODUCTS, INC.	$139,841	$1,216
	FIBREBOARD CORP.	$98,608	$857
	FORD MOTOR CO.	$104,887	$912
	GENERAL ELECTRIC CO.	$83,655	$727
	GOULD INC.	$125,204	$1,089
	GRANT OIL TOOL CO.	$72,220	$628
	HELLMAN ESTATES OIL CO.	$101,343	$881
	HERTZ CORP.	$85,218	$741
*	HI-PRODUCTION FORGE	$143,507	$1,248
	INGLEWOOD, CITY OF	$95,936	$834
	INLAND CONTAINER	$86,441	$752
	INMONT INK CORP.	$73,064	$635
	INTERSTATE BRANDS BAKERY	$83,895	$730
*	KERN FOODS INC.	$516,974	$4,495
	KEYSOR CENTURY CORP.	$598,227	$5,202
	LATCHFORD GLASS CO.	$95,149	$827
	LOS ANGELES, CITY OF	$95,204	$828
	MAGCOBAR / DRESSER INDUSTRIES	$84,596	$736
	MASTER PROCESSING CORP.	$107,798	$937
	MCCULLOCH CORP.	$83,936	$730
	NU CAR PREP	$84,640	$736
	OIL AND SOLVENT PROCESS CO.	$150,733	$1,311
	OLYMPIC PAINT AND CHEMICAL CO.	$75,366	$655
	PACIFIC PUMPS / DRESSER INDUSTRIES	$88,424	$769
	PACIFIC TUBE CO.	$90,509	$787

Exhibit-B
Operating Industries, Inc.
Schedule of Payment-1

	Generator	EPA Payment	State Payment
	PIONEER-FLINTKOTE	$73,231	$637
*	PRECISION HEAT TREATING CO.	$128,656	$1,119
	PRODUCTOL CHEMICAL CO. / FERRO CORP.	$163,263	$1,420
	PRUDENTIAL OVERALL	$91,717	$798
	PUREX CORP.	$79,460	$691
	R & D LATEX	$76,731	$667
	ROCKWELL INTERNATIONAL	$175,183	$1,523
	ROYAL ALUMINUM	$95,042	$826
	SHASTA BEVERAGE	$79,296	$690
*	SOUTHERN CALIFORNIA CHEMICAL	$491,836	$4,277
	SOUTHWEST FOREST INDUSTRIES	$73,294	$637
	STARKIST FOODS	$90,212	$784
	TELEDYNE	$79,637	$692
	VOI-SHAN	$76,573	$666
	WESLOCK CO.	$96,368	$838
	WESTERN CHEMICAL AND MANUFACTURING	$120,915	$1,051
	WILMINGTON LIQUID BULK	$132,962	$1,156
	ZOLATONE PROCESS INCORPORATED	$133,955	$1,165

* Any premiums included in these payments shall not be used in the calculation of any allocation pursuant to Paragraph H of Section XVIII (Reservation of Rights) of the first Partial Consent Decree as incorporated herein.

Exhibit-C
Operating Industries, Inc. Volumetric Totals *
Table-1
January 1991

Generator	Gallons	Tons	Other	Total Volume Converted to Gallons	% of Total
AMERICAN PETROFINA	218,400	100	500	243,957	0.134%
AMERITONE PAINT CORP. / TREWAX CO. **	271,428	0	0	416,298	0.229%
AMTRAK - NATIONAL RR PASSENGER CO.	152,400	0	3,000	155,400	0.085%
ARMSTRONG CORK CO.	125,540	0	210	125,750	0.069%
ARTRA-SYNKOLOID CO.	117,180	0	0	117,180	0.064%
B & C PLATING CO.	271,950	0	100	272,050	0.149%
BEHR PROCESSING	194,200	0	0	194,200	0.107%
BERNARD EPPS AND CO.	192,360	0	610	192,970	0.106%
BERWIND RAILWAY SERVICE CO.	180,600	0	0	180,600	0.099%
BIRD AND SON INC.	110,710	0	400	111,110	0.061%
BLACKTOP MATERIAL CO.	179,550	0	0	179,550	0.099%
CAPITOL METALS CO., INC.	126,140	0	100	126,240	0.069%
CHROME CRANKSHAFT	126,840	0	0	126,840	0.070%
CLOUGHERTY PACKING	258,930	0	370	259,300	0.142%
CONTAINER CORPORATION OF AMERICA	318,222	0	410	318,632	0.175%
COOPER AND BRAIN OIL CO.	161,700	0	250	161,950	0.089%
CROWN ZELLERBACH	154,318	0	240	154,558	0.085%
DECALTA OIL CO.	195,636	0	0	195,636	0.107%
DEUTSCH CO.	152,140	0	1,535	153,675	0.084%
DIAL CORP. ***	4,200	0	0	4,200	0.002%
EKCO PRODUCTS, INC.	163,970	0	0	163,970	0.090%
FIBREBOARD CORP.	156,090	0	0	156,090	0.086%
FORD MOTOR CO.	166,010	0	20	166,030	0.091%
GENERAL ELECTRIC CO.	132,240	0	180	132,420	0.073%
GOULD INC.	198,190	0	0	198,190	0.109%
GRANT OIL TOOL CO.	110,770	0	3,550	114,320	0.063%
HELLMAN ESTATES OIL CO.	155,720	0	4,700	160,420	0.088%
HERTZ CORP.	134,770	0	125	134,895	0.074%
HI-PRODUCTION FORGE	168,204	0	65	168,269	0.092%
INGLEWOOD, CITY OF	151,860	0	0	151,860	0.083%
INLAND CONTAINER	136,830	0	0	136,830	0.075%
INMONT INK CORP.	113,585	0	2,070	115,655	0.064%
INTERSTATE BRANDS BAKERY	132,380	0	420	132,800	0.073%
KERN FOODS INC.	605,976	0	200	606,176	0.333%
KEYSOR CENTURY CORP.	946,155	0	800	946,955	0.520%
LADISH PACIFIC DIVISION	384,972	0	100	385,072	0.212%
LATCHFORD GLASS CO.	150,340	0	275	150,615	0.083%
LOS ANGELES, CITY OF	136,652	0	14,050	150,702	0.083%
MAGCOBAR / DRESSER INDUSTRIES	133,810	0	100	133,910	0.074%
MASTER PROCESSING CORP.	170,562	0	75	170,637	0.094%
MCCULLOCH CORP.	127,190	0	5,675	132,865	0.073%
NANCE, G.R.	110,670	0	100	110,770	0.061%
NU CAR PREP	133,980	0	0	133,980	0.074%
OIL AND SOLVENT PROCESS CO.	238,600	0	0	238,600	0.131%

Exhibit-C
Operating Industries, Inc. Volumetric Totals *
Table-1
January 1991

Generator	Gallons	Tons	Other	Total Volume Converted to Gallons	% of Total
OLYMPIC PAINT AND CHEMICAL CO.	119,100	0	200	119,300	0.066%
PACIFIC PUMPS / DRESSER INDUSTRIES	139,969	0	0	139,969	0.077%
PACIFIC TUBE CO.	133,720	0	9,550	143,270	0.079%
PERVO PAINT CO.	115,920	0	75	115,995	0.064%
PIONEER-FLINTKOTE	115,920	0	0	115,920	0.064%
PRECISION HEAT TREATING CO.	150,800	0	55	150,855	0.083%
PRODUCTOL CHEMICAL CO. / FERRO CORP.	258,400	0	35	258,435	0.142%
PRUDENTIAL OVERALL	144,272	0	910	145,182	0.080%
PUREX CORP. ***	125,630	0	150	125,780	0.069%
R & D LATEX	120,960	0	500	121,460	0.067%
RENTA UNIFORM ***	143,490	0	4,000	147,490	0.081%
ROCKWELL INTERNATIONAL	277,188	0	115	277,303	0.152%
ROYAL ALUMINUM	150,346	0	100	150,446	0.083%
SHASTA BEVERAGE	125,370	0	150	125,520	0.069%
SOUTHERN CALIFORNIA CHEMICAL ***	514,700	0	62,000	576,700	0.317%
SOUTHWEST FOREST INDUSTRIES	115,920	0	100	116,020	0.064%
STARKIST FOODS	142,800	0	0	142,800	0.078%
TELEDYNE	126,060	0	0	126,060	0.069%
VOI-SHAN	112,255	0	8,955	121,210	0.067%
WESLOCK CO.	131,485	0	21,060	152,545	0.084%
WESTERN CHEMICAL AND MANUFACTURING	181,750	0	9,650	191,400	0.105%
WILMINGTON LIQUID BULK	210,210	0	260	210,470	0.116%
ZOLATONE PROCESS INCORPORATED	209,774	8	265	212,042	0.116%

* The volumes appearing on this attachment are subject to change as more information is gathered.

** Ameritone Paint includes Trewax (144,870 gals)

*** Reflects volume correction.

CERTIFICATE OF SERVICE

I, Shelley M. Sussman, declare:

That I am a citizen of the United States and resident employed in San Francisco County, California; that my business address is United States Environmental Protection Agency, Superfund Enforcement Branch, Region IX, 75 Hawthorne Street, San Francisco, California, 94105; that I am over the age of eighteen years and I am not a party to the above-entitled action;

That I am employed by the United States Environmental Protection Agency, Region IX, and that at the direction of a member of the Bar of the State of California on this day, I deposited in the United States mail at or near the Office of the Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, California, in the above-entitled action, in an envelope bearing the requisite postage, a copy of:

(PROPOSED) ORDER GRANTING MOTION TO ENTER AND AMEND SECOND PARTIAL CONSENT DECREE

addressed to those persons listed on the attached Service List, at their last known address, at which place there is a delivery service by United States mail.

This certificate is executed on June 25, 1991, at San Francisco, California.

I certify under penalty of perjury that the foregoing is true and correct.

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Attorneys for Plaintiff State of California, on behalf of the Department of Health Services and Hazardous Substance Account

UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

UNITED STATES OF AMERICA, THE STATE OF CALIFORNIA, and THE CALIFORNIA HAZARDOUS SUBSTANCE ACCOUNT Plaintiffs, v.	No. CV 88 7196 MRP(Kx) PARTIAL CONSENT DECREE

[redacted]

CHEVRON CHEMICAL COMPANY,
CHEVRON PIPE LINE CO.,
CHEVRON USA, INC.,
ATLANTIC RICHFIELD COMPANY,
including ANACONDA AMERICAN BRASS DIVISION,
AMERICAN NATIONAL CAN,
TEXACO INC., including RICHFIELD EAST DOME UNIT and SIGNAL HILL WEST UNIT and Subsidiaries,
EXXON CORPORATION,
MCDONNELL DOUGLAS CORPORATION,
UNOCAL CORPORATION,
NI INDUSTRIES, INC. for NORRIS, INC.,
SUN EXPLORATION & PRODUCTION COMPANY,
OCCIDENTAL PETROLEUM CORPORATION,
MOBIL OIL CORPORATION including SUPERIOR OIL COMPANY,
SOUTHERN CALIFORNIA GAS COMPANY,
KIEWIT CONTINENTAL, INC. for CONTINENTAL CAN,
SHELL OIL COMPANY,
SANTA FE ENERGY COMPANY/CHANSLOR WESTERN OIL DEVELOPMENT,
MARTIN MARIETTA CORPORATION for MARTIN MARIETTA CARBON INC., and COMMONWEALTH ALUMINUM CORPORATION (formerly known as MARTIN MARIETTA ALUMINUM, INC.),
UNION PACIFIC RESOURCES COMPANY for CHAMPLIN PETROLEUM CO.,
SOULE'-ARNON LIQUIDATING AGENCY,
CONOCO, INC.,
DOUGLAS OIL COMPANY OF CALIFORNIA,
GENERAL MOTORS CORPORATION,
LONG BEACH OIL DEVELOPMENT COMPANY,
LOCKHEED AERONAUTICAL SYSTEMS COMPANY a division of LOCKHEED CORPORATION,
INTERPACE CORPORATION,
ALUMINUM COMPANY OF AMERICA,
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT,
STROH CONTAINER COMPANY for JOSEPH SCHLITZ BREWING COMPANY
ALLIED-SIGNAL, INC. for GARRETT AIRESEARCH,
AMERICAN AIRLINES, INC.,
BETZ LABORATORIES, INC.,
BETHLEHEM STEEL CORPORATION,
INSILCO CORPORATION for SINCLAIR PAINT COMPANY,
DEPARTMENT OF WATER AND POWER of the CITY of LOS ANGELES,
///

NOTE: PARTIAL COPY
FULL CAPTION SIGNATURE PAGES
AND RODS NOT INCLUDED

OPERATING INDUSTRIES

QUANTUM CHEMICAL CORPORATION, EMERY DIVISION,
SOUTHERN CALIFORNIA EDISON COMPANY, REYNOLDS METALS COMPANY,
CALGON CORPORATION/CALGON VESTAL LABORATORIES,
UNITED STATES BRASS CORPORATION for EASTMAN CENTRAL,
LONG BEACH UNIT, WILMINGTON OIL FIELD, CALIFORNIA (CITY OF LONG BEACH, UNIT OPERATOR: THUMS LONG BEACH COMPANY, AGENT FOR FIELD CONTRACTOR),
MITCHELL ENERGY CORPORATION,
BORG-WARNER CORPORATION for BYRON JACKSON PUMP DIVISION,
INGERSOLL-RAND COMPANY for PROTO TOOL,
SOUTHWEST PROCESSORS, INC. for SOUTHWEST PROCESSORS, INC. and AMEROIL,
LIBERTY VEGETABLE OIL COMPANY,
EDGINGTON OIL COMPANY,
REICHHOLD CHEMICALS, INC.,
CROWLEY MARITIME CORPORATION for CROWLEY TOWING & TRANSPORTATION CO. and CROWLEY ENVIRONMENTAL SERVICES CORPORATION,
MENASCO, INC.,
USG CORPORATION for HOLLYTEX CARPET MILLS,
XEROX CORPORATION,
MAJOR PAINT COMPANY,
SOUTHERN PACIFIC TRANSPORTATION COMPANY,
TRW INC.,
COOPER DRUM COMPANY for SUPERIOR DRUM,
ANCHORLOK CORP. for ANCHORLOK LEAR SIEGLER CORP. and ROYAL INDUSTRIES, INC.,
SUPERIOR INDUSTRIES INTERNATIONAL, INC.,
FLINT INK CORPORATION,
BEATRICE/HUNT WESSON,
FRANCISCAN CERAMICS, INC.,
EMERSON & CUMING INC.,
THE TIMES MIRROR COMPANY for LOS ANGELES TIMES and TIMES MIRROR PRESS,
PPG INDUSTRIES, INC.,
PARKER-HANNIFIN CORPORATION for BERTEA CORPORATION,
DELTA AIR LINES, INC. for WESTERN AIRLINES,

SOUTHWESTERN ENGINEERING CO.,
THE UNIROYAL GOODRICH TIRE COMPANY,
INTERNATIONAL PAPER COMPANY,
ARATEX SERVICES, INC. for RED STAR INDUSTRIAL SERVICE,
MAYTAG CORPORATION for GAFFERS & SATTLER,
CARNATION COMPANY,
WELCH'S OVERALL CLEANING COMPANY, INC. for WELCH'S INDUSTRIAL UNIFORM,
GENERAL FELT INDUSTRIES, INC., a division of KNOLL INTERNATIONAL HOLDINGS, INC.,
WILLAMETTE INDUSTRIES INC. for WESTERN KRAFT,
TRANSPORTATION LEASING CO. for THE GREYHOUND CORP.,
NL INDUSTRIES, INC. for NL METALS,
McAULEY LCX CORPORATION,
UNITED AIR LINES, INC.,
THE PROCTOR & GAMBLE MANUFACTURING COMPANY,
JAYBEE MANUFACTURING CORPORATION,
SAFEWAY STORES, INC.,
THE FLYING TIGER LINE INC.,
LUXFER USA LIMITED,
TREE ISLAND INDUSTRIES LTD.,
GENERAL LATEX AND CHEMICAL CORP.,
ARMCO INC.,
REISNER METALS, INC.,
GATX TERMINALS CORPORATION,
DUNN-EDWARDS CORPORATION,
HUGHES AIRCRAFT COMPANY,
THE FIRESTONE TIRE & RUBBER COMPANY,
MAX FACTOR & COMPANY,
UNITED PARCEL SERVICE OF AMERICA, INCORPORATED,
CAIMAT CO. for CONROCK CO.,
SUPRACOTE, INC.,
FPCO OIL & GAS CO. for PETRO-LEWIS CORPORATION,
VAN WATERS & ROGERS,
DAVIDSON P.W.P,
KENOSHA AUTO TRANSPORT CORPORATION,
AMERICAN CAN COMPANY/PRIMERICA CORPORATION,
BORDEN, INC.,
DEFT, INC.,
COCA-COLA BOTTLING COMPANY OF LOS ANGELES,
OWENS-ILLINOIS, INC.,
CHAMPION INTERNATIONAL CORPORATION for ST. REGIS,

HYDRIL COMPANY, GEORGIA-PACIFIC CORPORATION, LEVER BROTHERS COMPANY, INC., 7UP/RC BOTTLING COMPANIES OF SOUTHERN CALIFORNIA, INTERNATIONAL EXTRUSION CORP., SPARKLETTS DRINKING WATER CORPORATION, BJ-TITAN SERVICES COMPANY, for B.J. SERVICES EQUIPMENT COMPANY, LONGVIEW FIBRE COMPANY, UNION CARBIDE CORPORATION, THE COCA-COLA COMPANY,

Defendants.

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PARTIAL CONSENT DECREE

WHEREAS, the United States of America (hereinafter "United States"), on behalf of the Administrator of the United States Environmental Protection Agency (hereinafter "EPA"), has filed concurrently with this Partial Consent Decree a complaint in this matter pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986) (hereinafter "CERCLA"), seeking to compel the Defendants (those parties identified in Section II (Parties) of this Partial Consent Decree, and hereinafter referred to as "Defendants") to perform certain remedial actions and to recover certain response costs that have been and will be incurred by the United States in response to alleged releases and threatened releases of hazardous substances from the landfill known as the Operating Industries, Inc. site (hereinafter "OII" or the "Site") located at 900 Potrero Grande Drive, Monterey Park, California.

WHEREAS, the State of California, on behalf of the Department of Health Services (hereinafter "the State") has filed concurrently with this Partial Consent Decree a complaint in this matter pursuant to CERCLA, the Hazardous Substance Account, California Health and Safety Code §§ 25300, et seq., California Civil Code § 3494, and California Health and Safety Code §§ 205 and 206 seeking to compel the Defendants to perform certain remedial actions and to recover certain response costs that have

been incurred by the State in response to alleged releases and threatened releases of hazardous substances from the Site.

WHEREAS, the United States and the State allege that the Operating Industries, Inc. landfill is a facility as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

WHEREAS, the United States and the State allege that the Defendants are persons, as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), and California Health and Safety Code § 25319 and that wastes and constituents thereof generated by the Defendants sent to and disposed of at the Site, are "hazardous substances," as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and California Health and Safety Code §§ 25316 and 25317.

WHEREAS, the United States and the State allege that the past, present, and potential migrations of hazardous substances from the Site constitute actual and threatened "releases," as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22), and California Health and Safety Code §§ 25320 and 25321, and further allege that the Defendants are persons subject to liability under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and California Health and Safety Code § 25360.

WHEREAS, pursuant to Sections 121 and 122 of CERCLA, the United States, the State and the Defendants have each stipulated and agreed to the making and entry of this Partial Consent Decree

(hereinafter "Decree" or "Consent Decree") prior to the taking of any testimony, and in full settlement of the claims raised in the complaints.

WHEREAS, the United States, the State and the Defendants have agreed upon a settlement pursuant to which certain Defendants are obligated to conduct certain remedial work and to make payments to the EPA and the State, and other Defendants are obligated to make payments to the EPA and the State.

WHEREAS, the United States, the State and the Defendants agree that the settlement of the claims raised in the complaints and entry of this Consent Decree is in good faith, in an effort to avoid expensive and protracted litigation, without any admission or finding of liability or fault as to any allegation or matter.

NOW THEREFORE, it is ORDERED, ADJUDGED, AND DECREED as follows:

I. JURISDICTION

The Court has jurisdiction over the subject matter of this action and the signatories to this Decree pursuant to CERCLA, 42 U.S.C. §§ 9601, et seq. and 28 U.S.C. §§ 1331, 1345, and pendent jurisdiction over the claims arising under the laws of California. The Defendants shall not challenge the Court's jurisdiction to enter and enforce this Decree. Defendants listed

in Section II (Parties) waive service of summons and, for the purpose of this Decree, agree to submit themselves to the jurisdiction of this Court.

II. PARTIES

A. The Parties to this Decree are the United States of America, the State, the California Hazardous Substance Account and the Defendants. All actions taken by the State pursuant to this Decree, including all approvals, reservations of rights, and covenants not to sue are solely those of the California Department of Health Services (DHS) and of no other agency except that the California Attorney General also covenants not to sue the Defendants, as provided in Section XXX (Covenant Not to Sue). Defendants are those entities listed herein.

B. Settling defendants are either defendants that have agreed to pay the specified amounts under the Schedules set forth in Attachment A and are identified in Attachment A ("Cash Defendants"), or other settling defendants that have agreed to undertake the Work and certain other obligations set forth in this Decree and are identified in Attachment B ("Work Defendants").

III. DENIAL OF LIABILITY

The Defendants deny any and all legal or equitable liability under any federal, state, or local statute, regulation,

ordinance, or common law for any response costs, damages or claims caused by or arising out of conditions at or arising from the OII Site. By entering into this Decree, or by taking any action in accordance with it, Defendants do not admit any allegations contained herein or in the complaints, nor do Defendants admit liability for any purpose or admit any issues of law or fact or any responsibility for the alleged release or threat of release of any hazardous substance into the environment. Nothing in this Section shall alter Defendants' agreement not to challenge the Court's jurisdiction as set forth in Section I (Jurisdiction).

IV. BINDING EFFECT

This Decree shall apply to and be binding upon the signatories, their successors, and assigns. No change in ownership or corporate or partnership status shall in any way alter the Defendants' responsibilities under this Decree. Each Defendant shall be responsible and shall remain responsible for carrying out all activities required of that particular Defendant under this Decree. The Work Defendants shall provide a copy of this Decree, as entered, and shall provide all relevant additions to the Decree, as appropriate, to each person, including all contractors and subcontractors, retained to perform the Work contemplated by this Decree, and shall condition any contract for the Work upon compliance with this Decree.

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Work Defendants shall be jointly and severally responsible for the performance of the Work Defendants' obligations outlined in this Decree. In the event of the inability to pay or insolvency of any one or more of the Work Defendants, regardless of whether or not that Work Defendant or Work Defendants enter into formal bankruptcy proceedings, or in the event that for any other reason one or more of the Work Defendants do not participate in the implementation of the Work, the remaining Work Defendants agree and commit to complete the Work and activities provided for in this Decree.

V. SITE BACKGROUND

The following is a summary of the Site background as alleged by the United States and the State which, for the purposes of this Decree, Defendants neither admit nor deny:

A. The Operating Industries, Inc. landfill is a 190-acre facility, as that term is defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), located at 900 Potrero Grande Drive, Monterey Park, California. The Site operated from 1948 through 1984, and, over the course of its operation, accepted industrial solid, liquid and hazardous wastes and municipal trash. Wastes accepted at the OII Site include hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and California Health and Safety Code §§ 25316 and 25317.

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B. The Site is located on the southwestern flank of the La Merced hills (also called the Montebello hills), and is divided by the California Highway 60 (Pomona Freeway), which runs roughly east-west through the Site, dividing it into a 45-acre North Parcel and 145-acre South Parcel. The Site is located at the boundary between the San Gabriel groundwater basin to the north and the Los Angeles Coastal groundwater basin to the south. The important water-bearing units underlying the Los Angeles and San Gabriel Basins, as well as the Site, are from oldest to youngest, upper Pliocene Pico Formation, lower Pleistocene San Pedro Formation, upper Pleistocene older alluvium (including "terrace gravels"), and the Recent Alluvium (California Department of Water Resources, 1961, 1966). The San Pedro Formation contains the five major aquifers of the Los Angeles Coastal Plain and the San Gabriel Basin, the Jackson, Hollydale, Lynwood, Silverado and Sunnyside aquifers. The lower Pliocene Repetto formation and older formations are found at depths greater than 1500 feet. The Site is approximately one mile east of the Whittier Narrows groundwater recharge area and the Rio Hondo River.

C. The Site was proposed for inclusion on the National Priorities List (NPL) in October, 1984, and was subsequently placed on the NPL in May, 1986, in accordance with Section 105(a)(8) of CERCLA, 42 U.S.C. § 9605(a)(8).

D. The contaminants found at the Site include hazardous substances as defined by CERCLA § 101(14) or as defined by California Health and Safety Code §§ 25316 and 25317.

E. There have been releases of hazardous substances from the Site and the Site poses numerous threats to human health and the environment. The population in proximity to the Site include the nearby residents of the City of Montebello and the City of Monterey Park, those who travel on the section of the Pomona Freeway which transects the Site, and workers in the several businesses located on or near the Site.

F. EPA is currently performing the Remedial Investigation/ Feasibility Study ("RI/FS") at the Site. The RI/FS was begun in 1984. Phases I and II of this study have been largely completed, and EPA is currently finishing Phase II and initiating Phase III of the RI. When the RI/FS is completed, it will result in the selection, design and implementation of a final overall remedy for the Site.

VI. PURPOSE

The purpose of this Decree is to resolve the dispute among the Parties as to whether remedial action may be necessary for the Leachate Management and Site Control and Monitoring Operable Units, (as described in Appendices A and B) to protect the public health, welfare, and the environment from conditions which may be present at the OII Site; obtain reimbursement from the Defendants for certain of Plaintiffs' response costs; and settle any and all claims against Defendants asserted by Plaintiffs in the complaints filed in this matter.

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This Decree is also intended to serve the public interest by protecting the public health, welfare, and the environment from alleged releases and threatened releases of hazardous substances at or from the OII Site by the implementation by the Work Defendants of remedial actions and operations, monitoring, and maintenance outlined in Section IX (Work to be Performed) of this Decree.

The Parties recognize that the final remedy will be determined after completion of the RI/FS and execution by the EPA of a Record of Decision which determines the final remedy. All Parties agree and the Court hereby determines that the remedies selected by the Records of Decision which are the subject of this Decree are consistent with the final remedy and are consistent with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 (hereinafter "National Contingency Plan" or "NCP"). The Work performed in the implementation of these Operable Units shall meet the substantive standards of all "applicable requirements" and "relevant and appropriate requirements" as those terms are defined in 40 C.F.R. § 300.6, as generally described in CERCLA Compliance with Other Environmental Statutes, October 2, 1985 (50 Fed. Reg. 47946, November 20, 1985), as required by Section 121 of CERCLA, 42 U.S.C. § 9621, and as provided in Appendices A and B to this Decree.

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VII. DEFINITIONS

A. "Appendix A" shall mean the Record of Decision for the Leachate Management Operable Unit.

B. "Appendix B" shall mean the Record of Decision for the Site Control and Monitoring Operable Unit.

C. "Appendix C" shall mean the OII Landfill SCM and LMS Scope of Work.

D. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601, et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986).

E. "Contractor" shall mean the individual, company or companies retained by or on behalf of the Work Defendants to undertake and complete the Work. Each contractor and subcontractor shall be qualified to do those portions of the Work for which it is retained.

F. "Costs" or "Response Costs" shall mean oversight, administrative, enforcement, removal, investigative and remedial or other expenses incurred or to be incurred by EPA or the State relative to the OII Site.

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G. "Construction" shall mean the phases of the Work involving the construction of the remedy, in accordance with the Design documents, the RODs and this Decree.

H. "Covered Matters" shall mean those conditions which the alternatives selected in the RODs (attached as Appendices A and B) are designed to remedy, the Work implemented under Section IX (Work to be Performed), oversight costs associated with the performance of that Work and for all past response costs, including interest accrued thereon, incurred by the United States, the State and the California Hazardous Substance Account up to June 1, 1988. Covered Matters specifically do not include removals, remedial actions which will be implemented pursuant to the final remedy, the gas control and any future operable unit(s), or any environmental condition which is identified in the RI/FS (except to the extent those removals, remedial actions, or those environmental conditions are already covered by Appendices A or B or the Work). The Parties also agree that remedial actions for groundwater contamination, if any, are not Covered Matters under this Decree.

I. "DHS" shall mean the California Department of Health Services.

J. "Defendants" shall include both the Cash Defendants and the Work Defendants. "Cash Defendants" shall mean those parties identified as Defendants and listed as such in Attachment A to this Decree. "Work Defendants" shall mean those parties

identified as Defendants and listed as such in Attachment B to this Decree.

K. "Design(s)" shall mean the phases of the Work wherein engineering plans and technical specifications are developed for implementation of the remedial actions, in accordance with the RODs and this Decree and the EPA Superfund Remedial Design and Remedial Action Guidance, (EPA OSWER Directive No. 9355.0-4A, June 1986) ("RD/RA guidance").

L. "EPA" shall mean the United States Environmental Protection Agency.

M. "Environment" shall mean (1) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management of the United States under the Fishery Conservation and Management Act, and (2) any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States, as defined in Section 101(8) of CERCLA, 42 U.S.C. § 9601(8).

N. "Hazardous substances" shall mean any substance included in the definition of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), or as defined by California Health and Safety Code §§ 25316 and 25317.

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O. "National Contingency Plan" or "NCP" shall refer to the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300, and shall be used as that term is referred to in Section 105 of CERCLA, 42 U.S.C. § 9605.

P. "OII Site" or the "Site" shall mean the landfill located at 900 Potrero Grande Drive, in Monterey Park, California.

Q. "Oversight" shall mean inspection by the EPA, the United States Army Corps of Engineers (USACE), the State, or their representatives, of remedial work and all other actions necessary to verify the adequacy of performance of activities and reports relating to the OII Site.

R. "Parties" shall mean the United States, the State and the Defendants.

S. "Plaintiffs" shall mean the United States, the State, and the California Hazardous Substance Account.

T. "Plan(s)" shall mean the plans developed by the Work Defendants which detail the elements of Work to be conducted pursuant to this Decree.

U. "Records of Decision" or "RODs" shall mean the documents signed by the EPA Region IX Deputy Regional Administrator on July 31, 1987, and November 16, 1987 which describe the remedial

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actions of two of the Operable Units to be conducted at the Site, and which are attached hereto as Appendices A and B.

V. "Release" shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant) as defined in Section 101(22) of CERCLA, and California Health and Safety Code §§ 25320 and 25321.

W. "Report(s)" shall mean the reports developed by the Work Defendants in compliance with this Decree, detailing the Work and the results of its implementation.

X. "State" shall mean the State of California on behalf of the Department of Health Services.

Y. "United States" shall mean the United States of America.

Z. "USACE" shall mean the United States Army Corps of Engineers.

AA. "Work" shall mean performance of the remedial alternatives selected in the Leachate Management and the Site Control and Monitoring RODs, and actions approved pursuant to the provisions of Section IX (Work to be Performed) herein, and Appendix C.

BB. "Work Completion Report" shall mean the report developed by the Work Defendants in compliance with this Decree, detailing the Work performed pursuant to this Decree.

VIII. PAYMENTS BY CASH DEFENDANTS

Each Cash Defendant listed in Attachment A shall make payments to EPA and the State as set forth in Attachment A. Except as specifically provided for in Attachment A, all payments shall be made within thirty (30) days of notice of entry of this Decree.

Any such payments set forth in Attachment A not scheduled to be paid within thirty (30) days of notice of entry of this Decree shall be secured by a surety bond, a letter of credit or other security device acceptable to EPA, which shall be delivered to EPA within thirty (30) days of notice of entry of this Decree. The payments of such amounts shall fully relieve each Cash Defendant of its responsibility for Covered Matters and shall entitle each Cash Defendant to Contribution Protection under Section XXIX (Contribution Protection) and to the Covenant Not to Sue under Section XXX (Covenant Not to Sue) with respect to all such Covered Matters, whether or not the other Defendants fulfill their obligations under this Decree. If EPA and the State do not receive all payments on behalf of any Cash Defendant under this Decree, that Defendant shall not be entitled to any benefits of this Decree, including those under the provisions of Section XXIX (Contribution Protection) and Section XXX (Covenant Not to Sue).

The Work Defendants shall have no responsibility to the United States, EPA, the State, the California Hazardous Substance Account, any other Defendant, or any third party for any payment required of, or failure to pay by, any Cash Defendant under this Section.

IX. WORK TO BE PERFORMED

A. General Obligations Regarding the Work

1. The Work Defendants shall finance and perform, as set forth in this Decree, the implementation of the Work as required by this Decree and Attachments and Appendices hereto.

2. Notwithstanding any approvals which may be granted by the EPA, the State, or other governmental entities, the Work Defendants shall not be relieved of any and all liability, if any, which may arise from or relate to their acts or omissions or the acts or omissions of any of their contractors, subcontractors, or any other person acting on their behalf in the performance of the Work or their failure to perform or complete the Work.

3. The Work Defendants shall design, implement, and complete the Work in accordance with the NCP, and with the standards, specifications, and schedule of completion set forth in or approved by the EPA pursuant to this Section. The Court finds and the Parties agree that the Records of Decision, as set

forth in Appendices A and B, and the Work if performed in compliance with the requirements of this Decree, are consistent with the NCP.

4. All activities undertaken by any Defendant pursuant to this Decree shall be undertaken in accordance with the requirements of all applicable state and federal laws, regulations, and all "applicable" and "relevant and appropriate" federal and state environmental requirements as identified pursuant to Section XV (Compliance with Applicable Laws and Regulations).

5. The Work Defendants shall select a contractor or contractors to conduct the Work which has expertise in investigation, analysis and remediation of hazardous waste problems, with particular expertise in site control and monitoring activities as well as the qualifications to design, construct, operate and maintain a leachate treatment plant. All Work performed by the Work Defendants shall be performed by qualified contractors in accordance with the conditions and schedules specified in this Decree. EPA will contract with a qualified person to oversee and review the conduct of the Work performed by Work Defendants.

6. Except where noted otherwise, all dates referred to in this Decree or any Attachments and Appendices to the Decree are calendar days; however, should a deadline fall on a weekend or a

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federal holiday, the deadline shall be construed to continue to the next business day.

7. While the Work Defendants may collect, treat, stage, and secure materials on-site, they may only redeposit material back into the Site with the explicit approval of EPA.

8. The Work Defendants shall dispose of any materials taken off-site in accordance with the EPA's Revised Procedures for Implementing Off-Site Response Actions ("Off-site Policy") (EPA OSWER Directive 9834.11, November 13, 1987), if applicable.

9. The Work Defendants shall submit all required reports pursuant to the provisions of Appendix C, this Section and Section XVI (Data Exchange).

10. The treatment facility constructed under the terms of this Decree shall not be used to treat wastes other than those associated with the OII Site.

11. EPA will make available to Work Defendants relevant EPA Region IX guidance documents.

12. If EPA disapproves work being performed by Work Defendants, the Work Defendants shall have ten (10) days from receipt of such disapproval, if necessary, to correct the work, or a longer period if deemed appropriate by EPA.

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B. Work To Be Undertaken

This Work and the applicable schedule and required deliverables are described more fully in the OII Landfill SCM/LMS Scope of Work ("Scope of Work"), attached as Appendix C to this Decree. The Records of Decision for the Operable Units addressed in this Decree are set forth in Appendices A and B. In general terms, the Leachate Management Operable Unit involves design, construction and operation of a Leachate Treatment System (as defined in Appendix C)("LTS"). The Site Control and Monitoring Operable Unit is intended to stabilize the OII Site during the period before the final remedy for the Site is implemented. It involves operation, monitoring and maintenance of environmental systems at the Site.

1. Site Control and Monitoring

The objective of the Site Control and Monitoring ("SCM") activities is to stabilize the OII Site during the period prior to implementation of the final remedy for the Site. These activities include control, maintenance, and monitoring of all systems at the Site, and system improvements. These systems include: gas extraction and the air dike, leachate collection and treatment, irrigation, access roads, stormwater drainage, Site security, and slope repair and erosion control. EPA will retain responsibility for Site security. The SCM activities will be conducted in accordance with the EPA Site Control and

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Monitoring Record of Decision, dated July 31, 1987 (attached hereto as Appendix B).

2. Leachate Management

The Leachate Management Operable Unit includes predesign, design, and construction of an onsite leachate treatment plant; and operation of the treatment plant following its completion. The objective of remedial predesign and design is to develop a complete design report, including complete design plans and specifications for a leachate treatment facility and its related facilities, including necessary pipelines. The leachate treatment facility will be located on the north parcel of the OII Site and will be designed consistent with the EPA Leachate Management Record of Decision, dated November 16, 1987 (attached hereto as Appendix A). The on-site treatment facility will be used to treat leachate and other liquids associated with the OII Site. The treatment facility will be designed to provide the flexibility required to treat varying qualities of liquids, and to allow for expansion to treat increased volumes of leachate or other liquids related to the OII Site as needed.

The objective of leachate treatment plant construction is to construct a complete functional treatment facility, and any related facilities specified in the Final LTS Design, as defined in Appendix C. The Work Defendants shall be responsible for furnishing, in accordance with the Final LTS Design, all plant, labor, equipment, and materials required for the treatment

facility, and related facilities at the OII Site, and shall ensure that all facilities are complete and functional.

Final Design documents for Site Control and Monitoring and Leachate Management, which shall include plans, specifications, construction schedules, and other pertinent information, shall be submitted to EPA in accordance with the schedule in Appendix C of this Decree.

C. Funding Limitations to Work

The Parties agree with respect to the Work to be performed under this Section that the Work Defendants' obligation to expend Work Defendants' funds for (1) the Leachate Management System (as described in Appendix C) shall not exceed $14,000,000 and (2) Site Control and Monitoring not relating to leachate management (as described in Appendix C) shall not exceed $20,000,000, except as otherwise provided in this Paragraph C.

In the event that Work Defendants' funds referenced in the previous sentence are exhausted in the performance of the Work to be performed under this Decree, the Work shall also be funded pursuant to the provisions of Section VIII (Payments by Cash Defendants), Section X (Escrow Account) herein and Attachment A hereto, and Work Defendants agree to continue to perform the Work until these additional funds, if any, and any funds received pursuant to EPA's direction or from EPA, if any, are exhausted, or until nine months after the date the ROD for the final Site

remedy has been signed, or eight (8) years after the effective date of this Decree, whichever is earliest. Upon the occurrence of the earliest event described in the preceding sentence, the Work Defendants shall have satisfied their obligations for Covered Matters under this Decree, and this Decree shall be terminated as provided in Section XLI (Termination and Satisfaction).

At the time of EPA approval of the final LTS Closecut Report, as defined in Appendix C, or an EPA determination under Paragraph D of Section XXII (Stipulated Penalties) made six (6) months or longer after EPA approval of the LTS Final Design, as defined in Appendix C, or earlier if agreed to by Work Defendants and EPA, the Work Defendants' funding limitations of $14,000,000 for Leachate Management System and $20,000,000 for Site Control and Monitoring not related to leachate management shall be consolidated into a $34,000,000 limit on the obligations of Work Defendants for both Leachate Management and Site Control and Monitoring.

After eight (8) years after the effective date of this Decree, or nine (9) months after the date the ROD for the final site remedy has been signed, whichever is sooner, should the Work Defendants have expended less than $34,000,000 for the Work, then the difference between the $34,000,000 and the amount expended shall be placed in the "Cash" Escrow Account for additional Site remediation work not covered by this Decree and shall be expended as determined by EPA in consultation with the Work Defendants.

The following expenditures specifically shall not be allocable against the funding limitations of this Paragraph:

1. any fines or penalties assessed for non-compliance with the provisions of this Decree or other laws;

2. Work Defendants' oversight costs including any internal corporate costs, or OII Steering Committee administrative and legal fees (as distinguishable from Work Defendants' Contractor's project management costs, which are so allocable);

3. costs associated with the judicial resolution of any disputes under Section XXIV (Dispute Resolution);

4. any costs arising out of claims or the defense of claims for personal injury, property damage, or other third party claims;

5. the costs of independent technical experts as provided for in Paragraph B of Section XXIV (Dispute Resolution); or,

6. the costs incurred by EPA resulting from any EPA determination under Paragraph D of Section XXII (Stipulated Penalties).

Nothing contained in this Paragraph shall preclude Work Defendants from asserting that such expenditures, excluding fines or penalties, are response costs under CERCLA and the NCP.

For Work which Work Defendants wish to apply against their funding limitations, annual submittals detailing the costs of such Work shall be provided to EPA as required under this Section IX (Work to be Performed), Section X (Escrow Account), and Appendix C.

D. Responsibility for Work

As to the Cash Defendants, the Work Defendants shall have exclusive responsibility for the performance of the Work and the Cash Defendants shall have no responsibility to the United States, EPA, the State, the California Hazardous Substance Account, any other Defendant, or any third party for the performance, or failure of performance, of the Work Defendants.

X. ESCROW ACCOUNT

Work Defendants shall establish the "OII Steering Committee Escrow Account - Consent Decree I" (Escrow Account), within ten (10) working days after the effective date of this Decree. The Escrow Account shall have one interest bearing account titled "Work" and one interest bearing account titled "Cash", and these accounts shall be segregated from each other.

A copy of the Escrow Agreement establishing the Escrow Account shall be sent to EPA and the State as soon as possible thereafter for approval primarily to ensure that the escrowed funds will be handled as set forth by this Decree. Neither EPA,

nor the State, through its approval of the terms of the Escrow Account, guarantees the sufficiency of the Escrow Account established by this Section.

A. Money received from the Work Defendants shall be deposited in the "Work" Escrow Account. The Escrow Agreement shall instruct and authorize the Escrow Manager to disburse the money in the "Work" Escrow Account for the following:

1. To pay the Work Defendants' contractor(s) for the Work;

2. To pay for other expenses, including any incurred penalties, required to be paid by the Work Defendants pursuant to this Decree and Attachments hereto;

3. To reimburse the Hazardous Substance Superfund for $1,400,000 for past response costs incurred by EPA, as provided in Section XX (Reimbursement of Past Costs) within thirty (30) days of notice of entry of this Decree; and

4. To reimburse the State for $500,000 for past response costs incurred by the State, as provided in Section XX (Reimbursement of Past Costs) within thirty (30) days of notice of entry of this Decree.

The Work Defendants shall deposit $1,900,000 in the "Work" Escrow Account within thirty (30) days of notice of entry of this Decree.

B. Money received from the Cash Defendants listed in Attachment A, Schedule 1 shall be deposited in the "Cash" Escrow Account. The Escrow Agreement shall instruct the Escrow Manager to use the money in the "Cash" Escrow Account for the purposes and in the amounts directed by EPA and as provided for in Attachment A to this Decree. The purposes include the following: reimbursement of EPA future response and oversight costs, past response costs, Work in excess of the Work Defendants' funding limitations pursuant to Paragraph C of Section IX (Work to be Performed), and for additional Site remediation work pursuant to Paragraph C of Section IX (Work to be Performed). Payments to EPA pursuant to this Paragraph B for reimbursement of: (1) EPA past response costs, including interest accrued thereon, as of June 1, 1988, will not exceed these actual costs which EPA currently estimates to be in excess of $21,500,000; and (2) EPA costs for the oversight of the Work under this Decree will not exceed these actual costs which EPA currently estimates will be $6,000,000. Use of the "Cash" Escrow Account for Work in excess of Work Defendants' funding limitations and additional Site remediation work, as both are described in Paragraph C of Section IX (Work to be Performed), shall be subject to the same provisions as the use of the "Work" Escrow Account for Work, and the provisions of Paragraph C of Section IX (Work to be Performed).

C. Other funds received pursuant to EPA's direction or from EPA, if any, shall be placed into the "Cash" Escrow Account.

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D. Interest received on each Escrow Account shall be paid into the account on which it was received, may be used first to pay for the account fees thereon and then shall be used in the same manner and for the same purposes as the other funds in the account.

E. Payment of money by Defendants to the Escrow Accounts is not a fine, penalty or monetary sanction.

F. The Escrow Agreement shall require that the Escrow Manager prepare and submit to the Work Defendants monthly statements on money received and disbursements for the prior thirty (30) days for both the "Work" and the "Cash" accounts, and the balances in the accounts as of the date of the statements. A copy of this monthly statement shall be sent promptly to EPA and the State. This monthly statement shall be included in the next monthly progress report, unless a different schedule is agreed to by EPA and the Work Defendants. In addition, within sixty (60) days of the establishment of the Escrow Account, and every ninety (90) days thereafter, in conjunction with the issuance of the most recent regular monthly statement by the Escrow Manager, the Work Defendants shall submit a financial report to EPA and the State. The financial report shall include cash flow projections for the amount of money estimated to be necessary for the "Work" Escrow Account expenses described in Subparagraphs 1 and 2 of Paragraph A of this Section, for the following ninety (90) day period. Subject to the funding limitations in Paragraph C of Section IX (Work to be Performed), if the amount of money in the

"Work" Escrow Account is less than the amount projected by the Work Defendants' report to be needed for the following ninety (90) days, Work Defendants shall deposit in the "Work" Escrow Account, within thirty (30) days, sufficient money to bring the level of the "Work" Escrow Account up to the amount projected to be needed for the following ninety (90) days.

G. Work Defendants shall submit an annual report to EPA and the State which shall include a summary of money received and disbursements for the preceding twelve (12) month period. This financial report also shall identify, in a format corresponding to the SCM/LMS Master Plan described in Appendix C, all expenses incurred which the Work Defendants assert apply against the funding limitations in Paragraph C of Section IX (Work to be Performed).

H. As provided in Section IX (Work to be Performed), eight (8) years after the effective date of this Decree or nine (9) months after the ROD for the final site remedy has been signed, whichever is sooner, should Work Defendants have expended less than $34,000,000 for the Work, then the difference between the $34,000,000 and the amount expended shall be placed in the "Cash" Escrow Account for Site remediation work not covered by this Decree and shall be expended as determined by EPA in consultation with the Work Defendants.

I. As provided in Section IX (Work to be Performed) and no sooner than the earlier of eight (8) years after the effective

date of this Decree or nine (9) months after the date the ROD for the final Site remedy has been signed, or upon termination of the terms of this Decree pursuant to Section XLI (Termination and Satisfaction), or upon Work Defendants' suspension of performance of the Work as described in Paragraph D(1) of Section XXII (Stipulated Penalties), the funds from the "Cash" Escrow Account shall be distributed as directed by EPA. In addition, in any of these events except for suspension of Work Defendants' performance of the Work as described in Paragraph D(1) of Section XXII (Stipulated Penalties), additional funds provided pursuant to Paragraph H of this Section, if any, shall be distributed as directed by EPA.

XI. WORKER HEALTH AND SAFETY PLAN

The Worker Health and Safety Plan that the Work Defendants will submit to EPA pursuant to Section IX (Work to be Performed) and Appendix C to this Decree shall satisfy the applicable requirements of the Occupational Safety and Health Guidance for Hazardous Waste Site Activities [October 1985 (DHH 5 NIOSH) Publication No. 85-115] and EPA's Standard Operating Safety Guides (EPA, OERR, November 1984). The Emergency Response Plan that the Work Defendants will submit to EPA pursuant to Section IX (Work to be Performed) and Appendix C to this Decree shall address both workers at the Site and public exposure to releases or spills at and from the Site.

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The Parties shall use best efforts to coordinate on-site activity plans.

XII. QUALITY ASSURANCE/QUALITY CONTROL

A. The Quality Assurance/Quality Control ("QA/QC") Plan that the Work Defendants shall submit pursuant to Section IX (Work to be Performed) and Appendix C to this Decree shall, where applicable, be prepared in accordance with current EPA guidance, Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAMS-005/80, and relevant EPA Region IX guidance. Additionally, the QA/QC Plan shall include procedures necessary for the implementation of trial test(s) of the pumping, treatment and any other process used as part of the Work. The QA/QC plan shall include a description of the mechanism used to verify that the processes are operating within acceptable limits. Upon approval and notice by EPA to the Work Defendants, the Work Defendants shall implement the Plan.

B. The Work Defendants shall use QA/QC procedures in accordance with the QA/QC plans submitted pursuant to this Decree, and shall utilize standard EPA chain of custody procedures, as documented in the National Enforcement Investigations Center Policies and Procedures Manual as revised in May 1986, and the National Enforcement Investigations Center Manual for the Evidence Audit, published in September 1981, for all sample collection and analysis activities, unless other procedures are approved by EPA. In order to provide quality

assurance and maintain quality control regarding all samples collected pursuant to this Decree, the Work Defendants shall ensure that the following QA/QC measures are employed at laboratories utilized for analyses:

1. Any laboratory utilized by the Work Defendants for analysis of samples taken pursuant to this Decree shall provide for access of EPA personnel and EPA authorized representatives to assure the accuracy of laboratory results related to the OII Site.

2. Any laboratory utilized by the Work Defendants for analysis of samples taken pursuant to this Decree shall perform all analyses according to EPA methods or methods deemed satisfactory to EPA and submit all protocols to be used for analysis to EPA in the plans and documents required under this Decree.

3. All laboratories utilized by the Work Defendants for analysis of samples taken pursuant to this Decree shall participate in an EPA or EPA equivalent QA/QC program. As part of the QA/QC program and upon request by EPA, such laboratories shall perform, at no cost to Plaintiffs, analyses of samples provided by EPA to demonstrate the quality of each laboratory's data.

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XIII. PROJECT COORDINATORS

A. By the effective date of this Decree, EPA, the State and the Work Defendants shall each designate a Project Coordinator to monitor the progress of the Work, to coordinate communication among the Parties and to oversee the implementation of this Decree. EPA, the State, and the Work Defendants each have the right to change their respective Project Coordinator. Such a change shall be accomplished by notifying the other Parties in writing at least seven calendar days prior to the change. To the maximum extent possible, communications between the Work Defendants, EPA and the State and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Decree, shall be directed through the Project Coordinators. The role of the State Project Coordinator shall be consistent with the provisions of Paragraphs A and D of Section XXXIV (State and Local Agency Participation), and EPA shall be the lead agency (as defined in the NCP).

The EPA Project Coordinator shall have the authority vested in the On-Scene Coordinator by 40 C.F.R. § 300 et seq., as well as the authority to ensure that the Work is performed in accordance with all applicable statutes, regulations, and this Decree. If the EPA On-Scene-Coordinator and the EPA Project Coordinator are two different individuals, EPA will make its best efforts to coordinate any direction given to the Work Defendants by the On-Scene-Coordinator and the EPA Project Coordinator.

The EPA Project Coordinator or On-Scene-Coordinator shall also have the authority to require a cessation of the performance of the Work or any other activity at the Site, if EPA determines that the Work or such activity may present or contribute to an endangerment to public health, welfare, or the environment or cause or threaten to cause the release of hazardous substances from the Site. In the event the EPA Project Coordinator or On-Scene-Coordinator takes any action which results in the delay of the Work or any other activity required by this Decree, the Parties may if necessary extend the compliance schedule of this Decree for only that amount of time which EPA determines is necessitated by the event. Should the Work Defendants desire to extend the compliance schedule pursuant to this Section, the Work Defendants shall propose an extension and the EPA shall determine the length of any extension. If the EPA Project Coordinator takes any action which results in the delay of the Work or any other activity required by this Decree for any of the reasons set forth in this Paragraph and those reasons are due to the acts or omissions of the Work Defendants or the Contractor(s), then any extension of the compliance schedule shall be at EPA's discretion. The absence of the EPA Project Coordinator from the Site shall not be cause for stoppage of the work.

B. Work Defendants' Project Coordinator shall be responsible for directing the day-to-day activities of Work Defendants and Work Defendants' contractors in the performance of the Work. The Work Defendants' Project Coordinator may assign

other representatives, including other contractors, to serve as a site representative for oversight of performance of daily operations during remedial activities.

C. Prior to invoking formal Dispute Resolution procedures, any unresolved disputes arising between the EPA site representatives and the Work Defendants or their contractors shall be referred to the EPA and Work Defendants' Project Coordinators.

XIV. SITE ACCESS

A. To the extent that the Site or other areas where Work is to be performed is presently owned or controlled by parties other than those bound by this Decree or to the extent that access to or easements over property is required for the proper and complete performance of this Decree, the Work Defendants shall use their good faith efforts to obtain access agreements from the present owners or those persons who have control over the property, including lessees. Site access agreements shall provide reasonable access to the Defendants, the Work Defendants' contractor(s), the United States on behalf of EPA and USACE, the State and local agencies, and their authorized representatives. In the event that Work Defendants are unable to obtain necessary access agreements sixty (60) days in advance of the need for such access, Work Defendants shall notify Plaintiffs regarding the lack of and the efforts to obtain such agreements. If Work Defendants fail to gain access within sixty (60) days, they shall

continue to use good faith efforts to obtain access. If the Plaintiffs and Work Defendants, through continued joint or individual efforts, are unable to obtain such access, or suitable alternative access, a force majeure event shall be deemed to have occurred, and the affected work shall be modified, if necessary, by mutual agreement of the Work Defendants and Plaintiffs, to take into account the lack of such access.

To the extent that EPA has control over access to portions of the OII Site, and in light of the fact that EPA intends to continue to provide site security and control access to portions of the Site, EPA agrees to provide reasonable access to those technical representatives of Work Defendants required to carry out the field work detailed in this Decree. Within seven (7) days of the effective date of this Decree, Work Defendants shall provide the EPA Project Coordinator with a list of necessary personnel and their company affiliations, to be added to the list of persons who shall be provided access to the Site. This list can be amended as necessary. Upon request, EPA will provide access to other representatives of Defendants, as is necessary and appropriate.

B. The EPA, the USACE, the State, and their representatives, including contractors, reserve all rights under Section 104 of CERCLA and, during the effective period of this Decree, shall have access at all times to the Site and, during reasonable times with reasonable notice, to any contiguous

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property owned or controlled by any Defendant, for activities, including but not limited to:

1. Monitoring the progress of activities taking place;

2. Verifying any data or information submitted to EPA;

3. Conducting investigations relating to contamination at and near the Site;

4. Obtaining samples at the Site.

As to activities relating to the Site, the EPA, the USACE, the State, and their representatives shall also have access for the purposes of inspecting and copying records, operating logs, contracts, or other documents as specified in Section XVI (Data Exchange).

Any person obtaining access to the Site pursuant to this provision shall comply with all applicable provisions of the Work Defendants' worker health and safety plan as submitted pursuant to Section XI (Worker Health and Safety Plan) and Appendix C of this Decree.

XV. COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS

All actions required to be taken by any Party pursuant to this Decree shall be undertaken in accordance with the

requirements of all applicable federal, state, and local laws, and regulations, including the NCP. Work Defendants shall obtain, or cause their contractors to obtain, except as provided in Section 121(e)(1) of CERCLA, all permits and approvals necessary under such laws and regulations.

XVI. DATA EXCHANGE

A. The Defendants shall make the results of all sampling and/or tests or other data generated by the Defendants, or on the Defendants' behalf, with respect to the implementation of this Decree available to EPA in accordance with the provisions of this Decree. EPA will make available to the Work Defendants the results of sampling and/or tests or other data similarly generated by EPA.

B. Under the provisions of Section 104(e) of CERCLA, EPA and the State explicitly reserve the right to observe the Work of the Work Defendants as it is performed. In addition, at the request of EPA or the State, the Work Defendants shall allow split or replicate samples to be taken by EPA or the State and/or their authorized representatives, of any samples collected by the Work Defendants or any one acting on the Work Defendants' behalf pursuant to the implementation of this Decree. To the extent practicable, any such observation and sample collection shall be coordinated through the EPA Project Coordinator. At the request of Work Defendants, Plaintiffs and/or their authorized representatives shall allow Work Defendants to split or replicate

any samples collected by Plaintiffs and/or their authorized representatives.

C. The Party performing sampling for the purposes of implementing this Decree shall notify the other Parties as soon as possible but no less than seven (7) days in advance of any sample collection activity, and the party desiring to take split samples shall inform the other party at least three (3) days prior to the scheduled sampling event. The Party performing the the sampling activity shall inform the other Parties at least twenty-four (24) hours in advance if the planned sampling schedule cannot be met. Notwithstanding the foregoing, within seven (7) days after the approval of any sampling plan (including the schedule for implementation), Work Defendants shall notify Plaintiffs of the intended date of commencement of the sampling activity. EPA shall be notified thirty (30) days prior to the disposal of any such samples, and EPA shall have an opportunity to take possession of all or a portion of such samples.

D. The Work Defendants need not provide EPA with seven (7) day notice of routine sampling relating to the operation of the treatment system; however, the Work Defendants shall provide EPA with a schedule for all routine sampling. The Work Defendants shall notify EPA seven (7) days in advance of any changes in the routine sampling schedule. The Work Defendants need not provide EPA with advance notice of changes in the treatment system routine sampling as a result of unexpected conditions. The Work Defendants shall, however, notify EPA within forty-eight (48)

hours of such occurrence and shall provide EPA with the results of analysis of such sampling when the results become available.

E. Plaintiffs and Defendants agree to exchange technical data and information relating to environmental and public health issues, site conditions, site use and history, and regional environmental conditions relating to the performance of the Work or which would be covered by the provisions of Section 104 of CERCLA, as such data and information becomes available, including but not limited to:

1. Raw analytical, monitoring, sampling, geographical, hydrogeological, geologic, meteorological, surface water, landfill gas, subsurface gas, or ambient air data, resulting from any environmental testing relating to the OII Site;

2. Technical working drafts and final reports, letter reports, work plans, documents, memoranda, status reports, and written material, any of which are developed using data generated by the Work Defendants as part of the implementation of this Decree or generated by Plaintiffs relating to the OII Site;

3. All technical maps, computer generated graphics, charts, tables, data sheets, geologic cross-sections, lithologic logs, graphs, photographs, slides, or

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other such material developed relating to the OII Site; and

4. Computerized compilations of technical data and information relating to the OII Site, including the display and organization of data bases.

Summaries and tabulations of laboratory data may be reviewed for clerical and gross laboratory handling errors prior to submission pursuant to this Paragraph.

F. The Parties shall provide notice in a timely manner of any project which is likely to produce data or information subject to this Section.

G. Defendants recognize that the data and reports generated under this Decree are not subject to the protection of Section 1905 of Title 18 and 40 C.F.R. Part 2 as confidential information. Moreover, the Parties explicitly recognize that the provisions of Section 104(e)(7)(F) of CERCLA apply to data and information generated by the Defendants. The Work Defendants shall not assert a claim of confidentiality regarding any hydrogeological or chemical data, or any data submitted in support of the Work. Defendants reserve their rights to assert a confidentiality claim for all other information pursuant to Section 1905, Title 18 and 40 C.F.R. Part 2, and any applicable state laws and regulations. The provisions of this Section shall not constitute a waiver of any applicable claims of attorney work

product or attorney client privilege. In addition, the United States reserves all its rights with regard to information otherwise not subject to disclosure under applicable law. The State is not obligated to provide any materials pursuant to this Section which are subject to applicable attorney work product claims, attorney-client privilege, or which the State is not required to disclose under California Government Code Section 6254, except that Section 6254(b) shall not apply to the extent that the State has made requested materials available to parties to any pending litigation.

H. All data, factual information, and documents submitted by the Defendants to EPA and the State pursuant to this Decree and determined by EPA or the State, as appropriate, not to be confidential shall be subject to public inspection.

I. If any of the Cash Defendants wish to perform any sampling activity on or contiguous to the Site, they shall first provide notice to the Project Coordinators and obtain permission from EPA and the contiguous property owner if such owner is a Defendant. In such an event, the provisions of this Section shall apply to that Cash Defendant.

J. Subject to Paragraph G above, any Cash Defendant shall, at its request in writing, have access to all data, factual information and documentation generated under this Decree or described in Section IX (Work to be Performed) and Appendix C. The cost of copying shall be borne by the Cash Defendant. Any

such data, factual information or documents obtained by any Cash Defendant shall be subject to the provisions of this Section.

XVII. RETENTION OF RECORDS

The Defendants shall preserve and retain all records and documents now in their possession or control or in the possession or control of their divisions, employees, agents, accountants, contractors or attorneys which relate to the performance of the Work or which would be covered by the provisions of Section 104 of CERCLA, regardless of any document retention policy to the contrary, during the pendency of this Decree and for six (6) years after its termination.

Until this six (6) year period expires, the Defendants shall preserve, and shall instruct all contractors, all contractor's subcontractors, and anyone else acting on the Defendants' behalf at the OII Site to preserve (in the form of originals or exact copies, or in the alternative, microfiche of all originals) all records, documents and information specified above. During this six (6) year period following the termination of this Decree, if requested by EPA or the State, originals or copies of all such records, documents, and information shall be delivered to the EPA and the State Project Coordinators or designees, as appropriate. After this six (6) year period, the Defendants shall notify the EPA and the State no later than sixty (60) calendar days prior to the destruction of any such documents. Upon request by EPA or the State made within thirty (30) days of such notice, the

Defendant proposing to destroy records shall make available to the EPA or the State, as appropriate, originals or copies of any such records prior to their destruction. The United States and Defendants are not obligated to provide any materials pursuant to this Section which are subject to applicable attorney work product claims or attorney-client privilege, or both. In addition, the United States reserves all its right with regard to information otherwise not subject to disclosure under applicable law.

EPA shall preserve and retain all records and documents now in their possession or control or in the possession or control of their divisions, employees, agents, accountants, contractors or attorneys which relate to any field activities at the OII Site performed by EPA, are received under the provisions of Section 104 of CERCLA, or which relate to the performance of the Work under this Decree, as required by the EPA Office of Information Resources Management Document Number 2160, entitled Records Management Manual and the corresponding EPA Records Management Manual, Appendix B, Records Control Schedules.

The State shall preserve and retain all records and documents now in its possession or control or in the possession or control of its divisions, employees, agents, accountants, contractors or attorneys which relate to the performance of the Work under this Decree or which relate to activities performed or investigations, or enforcement actions taken by the State at the OII Site regardless of any documents retention policy to the

contrary, during the pendency of this Decree and for six (6) years after its termination. After such six (6) year period, the State shall notify the Defendants no later than sixty (60) calendar days prior to the destruction of any such documents. Upon request by any Defendant made within thirty (30) days of such notice, the State shall make available to the requesting Defendant originals or copies of any such records prior to their destruction. The State is not obligated to provide any materials pursuant to this Section which are subject to applicable attorney work product claims, attorney-client privilege, or which the State is not required to disclose under California Government Code Section 6254, except that Section 6254(b) shall not apply to the extent that the State has made requested materials available to parties to any pending litigation.

This Section shall not apply to exact duplicates.

XVIII. RESERVATION OF RIGHTS

A. Nothing in this Decree shall constitute or be construed as a covenant not to sue with respect to, or a release from any claim, cause of action, or demand in law or equity, which the Parties may have against any person, as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21) or California Health and Safety Code § 25319, not a signatory to this Decree.

B. Notwithstanding compliance with the terms of this Decree, including the completion of EPA approved Work, the

Defendants are not released from liability for any matters beyond the terms of this Decree. For matters beyond the terms of this Decree, the United States, EPA and the State reserve the right to take any enforcement action pursuant to CERCLA and/or any other authority, including the right to seek response costs, injunctive relief, monetary penalties, and punitive damages.

C. Notwithstanding any other provision in this Decree, the Covenant Not to Sue, as provided in Section XXX (Covenant Not to Sue), shall not relieve any Defendant of its obligation to meet and maintain compliance with the requirements set forth in this Decree. The United States, EPA and the State reserve all rights to take enforcement actions for violations of this Decree.

D. In the event EPA determines that the Work Defendants have failed to implement any provisions of the Work in an adequate or timely manner, or in the event of an imminent or substantial endangerment to the public health or welfare or the environment, EPA may perform any and all portions of the Work as it determines may be necessary, subject to the reimbursement provisions of Paragraphs A and B of Section XIX (Reimbursement of Future Response and Oversight Costs). If the EPA decides to perform work which is the subject of this Decree, the EPA will provide the Work Defendants' and the State's Project Coordinator with advance notice thereof and, to the extent practicable, the opportunity for consultation regarding EPA's intention to perform a portion of or all of the Work. EPA and the State may agree

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that the State may perform work pursuant to the provisions of this Paragraph.

E. Nothing in this Decree shall be deemed to limit the response authority of EPA under Section 104 of CERCLA, 42 U.S.C. § 9604, and under Section 106 of CERCLA, 42 U.S.C. § 9606, or under any other federal response authority, except to the extent that Defendants have a Covenant Not to Sue for Covered Matters under Section XXX (Covenant Not to Sue). Nothing in this Decree shall be deemed to limit the response authority of the State under Section 25358.3 of the California Health and Safety Code or under any other response authority, except to the extent that Defendants have a Covenant Not to Sue for Covered Matters under Section XXX (Covenant Not to Sue).

F. Except as provided in Section I (Jurisdiction), Section IV (Binding Effect) and Section XXXVII (Claims Against the Fund), Defendants expressly reserve all legal and equitable rights and defenses that they may have under this Decree, CERCLA, or any other legal authority, including all arguments concerning compliance with the specific tasks and requirements of this Decree. Except as provided in this Decree and Section 113(f)(2) of CERCLA, this reservation of rights applies to all claims, actions and defenses of Defendants against non-settlers, the United States, the State of California, EPA or any others and to those assertable between and among the individual Defendants. Except as provided in Section XXVIII (Defendants' Right of Contribution and Indemnity and Covenant Not to Sue Each Other)

and Section XXXVII (Claims Against the Fund), or otherwise in this Decree, these rights include, but are not limited to, the right to seek reimbursement for response actions taken and response costs paid by any of the Defendants at any time.

G. Defendants reserve any and all rights of contribution from any or all persons who are not Defendants as defined herein for all costs incurred by Defendants under this Decree or otherwise complying with the requirements of this Decree. Nothing in this Decree shall be construed as limiting Defendants' right to seek contribution from any or all liable persons who are not Defendants.

H. In reaching this settlement, the Parties looked to a calculation which did not specifically address individual defenses or hazardous substances deposited by persons not parties to this Decree. Rather, the Parties have allocated costs in a general fashion reflective both of the volumes of wastes deposited at the Site by the Defendants and of the nature of each Defendant's participation in this Decree. If an allocation is performed at the time a final remedy has been chosen, for the purpose of resolving any liability remaining at that time, and if it is determined that a Defendant's relative share of liability (expressed as a percentage) is less than what was calculated for the purposes of this settlement, as reflected in Attachment C, the payment otherwise required in the resolution of final site liability should be reduced by an amount corresponding to the Percentage Reduction of a Defendant's relative share of liability

times either the amount paid by a Cash Defendant, or the amount paid and the value of Work performed in accordance and in full compliance with this Decree, by a Work Defendant in this settlement. The Percentage Reduction should be determined by dividing a Defendant's reduction in relative share of liability determined by an allocation made, if any, at the time of final settlement by that Defendant's relative share of liability among Defendants as reflected in Attachment C.

For purposes of this Paragraph H, the value of Work performed for each Work Defendant shall be the greater of the value of all costs incurred consistent with the NCP (excluding penalties) in performing the Work pursuant to this Decree, or an amount equal to $11,500 per 0.01% for the volume indicated for that Work Defendant in Attachment C. Notwithstanding the above, it is intended that any reallocation to "non-noticed PRPs" resulting from the application of any credit pursuant to this Paragraph H shall be based upon the amount of the credit which is reflected by the payments made by the Cash Defendants and the amount paid and the actual costs to the Work Defendants in performing the Work consistent with the NCP (excluding penalties). "Non-noticed PRPs" shall mean any potentially responsible party under Section 107(a) of CERCLA which has not been notified by EPA of its status as a potentially responsible party at the OII Site as of the effective date of this Decree.

The Parties agree that this credit provision will not apply if the use of the credit would result in the United States or the

State of California not recovering their total costs for the final Site remedy. The Parties further agree that this provision shall not be construed as any restriction of joint and several liability under CERCLA, nor shall it be construed as any commitment on the part of the United States to use the Hazardous Substance Superfund to pay for any portion of the cost of the final remedy or any other response activities. In addition, this Paragraph H shall not restrict, in any way, the United States' or EPA's or the State's ability to recover those costs not recovered under this Decree from the appropriate persons potentially liable under Section 107 of CERCLA. In the event that the United States or the State reach a settlement with some or all of the appropriate potentially responsible persons under Section 107 of CERCLA regarding their ultimate liability for costs incurred or work to be performed at the OII Site on any terms, this Paragraph H shall not be the basis for an objection to such settlement or a motion for entry of any future Consent Decree by any signatory to this Decree.

I. In no case shall any Defendant be entitled to a refund or to assert a claim against the Superfund under Sections 106(b)(2) or 112 of CERCLA for any amount paid, or expended, under this Decree even if that Defendant is later determined, based upon its assertion of defenses in a subsequent proceeding, to be not liable for response costs for the Site or to be liable for response costs less than those paid, or expended, pursuant to this Decree.

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J. Nothing in this Section shall limit any Defendant's right to a Covenant Not to Sue under Section XXX (Covenant Not to Sue) or Contribution Protection under Section XXIX (Contribution Protection) for all Covered Matters.

XIX. REIMBURSEMENT OF FUTURE RESPONSE AND OVERSIGHT COSTS

A. The Work Defendants shall reimburse EPA's Hazardous Substance Superfund or the State for the costs incurred for any activities outlined in Section IX (Work to be Performed) which are performed by EPA or the State, pursuant to the provisions Paragraph D of Section XVIII (Reservation of Rights). These costs shall be subject to the funding limitations of Paragraph C of Section IX (Work to be Performed). The Work Defendants shall, within thirty (30) calendar days of receipt of demand for payment, remit a check for the amount of those costs made payable to the Hazardous Substance Superfund, or the Department of Health Services, as appropriate.

B. Reimbursement under this Section shall also be required in the event that EPA determines that Work Defendants have failed to perform any material portion of the Work or have performed any portion of the Work in a substantially inadequate or substantially untimely manner, or in the event of an imminent and substantial endangerment to public health or welfare or the environment resulting from the performance of, or failure to perform, Work by the Work Defendants. If EPA or the State assumes performance of any portion of the Work based on such a

determination, the Work Defendants shall, within thirty (30) calendar days of receipt of demand for payment, remit a check for the amount of those costs made payable to the Hazardous Substance Superfund or the DHS, as appropriate. In such an event, the funding limitations of Paragraph C of Section IX (Work to be Performed) shall not apply.

C. Defendants shall reimburse the Hazardous Substance Superfund for the costs incurred by EPA to oversee and review the work under this Decree. These payments shall be made in the amounts set forth and as described in Paragraph B of Section X (Escrow Account), Section VIII (Payments by Cash Defendants) and Attachment A to this Decree.

D. Any payment made pursuant to this Section shall not constitute an admission by Defendants of any liability to EPA, the State or any other person or agency. The checks shall reference the OII Site, and be addressed to:

U.S. Environmental Protection Agency - Region 9
Attn: Superfund Accounting
P.O. Box 360863M
Pittsburgh, PA 15251

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or, as appropriate:

California Department of Health Services
Toxics Substances Control Division
P.O. Box 942732
Sacramento, CA 94234-7320

A copy of the transmittal letter and a copy of the check shall be sent to the EPA or State Project Coordinator, as appropriate.

XX. REIMBURSEMENT OF PAST COSTS

A. Defendants agree to reimburse the Hazardous Substance Superfund for certain past response costs which have been incurred by EPA in responding to the conditions at the OII Site, including costs for emergency response actions which have been taken at the OII Site, remedial investigation activities performed by EPA and its contractor, and site control and monitoring activities. EPA will provide Defendants with a copy of the appropriate SPUR (Software Package for Unique Reports, EPA's Superfund accounting system document) which provides an accounting of its costs for the period up to and including June 1, 1988. EPA will also provide a summary accounting of its indirect and interest cost calculations. These reimbursements shall be made in the amounts set forth and as described in Section VIII (Payments by Cash Defendants), Section X (Escrow Account) and Attachment A to this Decree. Work Defendants shall

pay $1,400,000 in EPA past response costs, as provided for in Section X (Escrow Account). A copy of all transmittal letters and a copy of all checks shall be sent to the EPA Project Coordinator.

B. Defendants agree to reimburse the State of California Hazardous Substance Account for certain past response costs which have been incurred by the State in responding to conditions at the OII Site. The State will provide the Defendants an accounting of its costs for the period up to and including June 1, 1988. These payments shall be made in the amounts set forth as described in Section VIII (Payments by Cash Defendants), Section X (Escrow Account) and Attachment A to this Decree. Work Defendants shall pay $500,000 in past response costs, as provided for in Section X (Escrow Account). A copy of the transmittal letter and a copy of the check shall be sent to the State Project Coordinator.

C. Such payments by Defendants to the EPA and the State as provided in Paragraphs A and B above, are not a penalty, fine or monetary sanction of any kind.

XXI. PRIORITY OF CLAIMS

In any contribution action, the rights of any Defendant shall be subordinate to the rights of the United States or the State, pursuant to the provisions of Section 113(f)(3)(C) of CERCLA.

XXII. STIPULATED PENALTIES

A. General Provisions

1. Stipulated penalties shall apply for untimely or inadequate submittals or Work required under the terms of this Decree except where due to the occurrence of a force majeure event, pursuant to Section XXIII (Force Majeure). Penalties shall apply from the first day after the deadline for performance of a requirement of this Decree until the requirement is satisfied.

2. For inadequate submittals or Work, EPA shall provide to Defendants, as soon as possible, oral notification of the occurrence of an event which triggers stipulated penalties, with written confirmation within seven (7) days of the occurrence of that event. In the event that EPA fails to so notify Defendants, stipulated penalties shall accrue from the date on which Defendants receive such notice.

3. Stipulated penalties under this Paragraph shall be paid upon demand, by certified check made payable to the Hazardous Substance Superfund, and addressed as indicated in Section XIX (Reimbursement of Future Response and Oversight Costs) and shall be paid within thirty (30) days of receipt of the demand for payment of stipulated penalties. Failure to pay a stipulated penalty on time shall also constitute such an event subject to stipulated penalties. A copy of the check and the letter

forwarding the check, including a brief description of the triggering event, shall be submitted to the United States in accordance with Section XXV (Form of Notice), herein.

4. Notwithstanding the stipulated penalties provisions of this Section, and to the extent authorized by law, EPA or the State may elect to assess civil penalties or bring an action in District Court to enforce the provisions of this Decree. Payment of stipulated penalties shall not preclude EPA or the State from electing to pursue any other remedy or sanction to enforce this Decree, and nothing shall preclude EPA or the State from seeking statutory penalties against the Work Defendants for violations of statutory or regulatory requirements relating to the performance of the Work under this Decree, provided that the total shall not exceed $25,000 per day per violation.

5. In the event the EPA or the State assumes the performance of a portion or all of the Work, pursuant to Section XVIII (Reservation of Rights), the Work Defendants would be liable for stipulated penalties pursuant to this Section. As provided for in Paragraphs A and B of Section XIX (Reimbursement of Future Response and Oversight Costs), if EPA or the State performs all or portions of the Work because of the Work Defendants' failure to comply with their obligations under this Decree, the Work Defendants shall reimburse the EPA or the State for the costs of doing such work within thirty (30) days of receipt of demand for payment of such costs, plus penalties, pursuant to Paragraphs C or D of this Section, as applicable.

6. The Work Defendants are jointly and severally liable for any stipulated penalties pursuant to the provisions of this Section provided, however, that the total amount due and payable for each day of each violation shall not exceed those limits specified in this Section.

7. Work Defendants may invoke the dispute resolution procedures set forth in Section XXIV (Dispute Resolution) in any case that results in stipulated penalties based on a determination of inadequacy including any determination of inadequacy by EPA pursuant to Paragraph D of Section XVIII (Reservation of Rights). Invoking the dispute resolution process shall not toll or suspend the accrual of stipulated penalties, subject to the provisions of Section XXIV (Dispute Resolution).

B. Monthly Progress Reports

1. The Work Defendants shall provide written monthly progress reports to EPA as described in Appendix C. These monthly progress reports shall describe all actions taken to comply with this Decree during this reporting period, including a general description of Work commenced or completed during the reporting period, Work projected to be commenced or completed during the next reporting period, any problems that have been encountered or are anticipated by the Work Defendants in commencing or completing the Work, and shall also include the monthly statements for the Escrow Accounts as described in Paragraph F of Section X (Escrow Account). These monthly

progress reports shall be submitted to EPA by the fourteenth (14th) day of each month, and should cover the work done the preceding calendar month and planned for the current calendar month.

2. If a submitted monthly progress report is inadequate, or if the Work Defendants fail to submit any monthly progress report in accordance with the schedule set forth above, then the Work Defendants shall be considered to be in violation of this Decree and subject to stipulated penalties as governed by this Section.

3. The Work Defendants shall pay stipulated penalties of $1,000 per day for the submission of inadequate or late monthly progress reports as called for in this Section.

C. Work to be Performed and All Other Deliverables

1. Any reports, plans, specifications (including discharge or emission limits), schedules, appendices, and attachments required by this Decree are, upon approval by EPA, incorporated into this Decree. Any noncompliance with such EPA approved reports, plans, specifications (including discharge or emission limits), schedules, appendices, and attachments shall be considered a failure to comply with this Decree and subject to stipulated penalties as governed by this Section. In the event Work Defendants exceed discharge or emission limits, stipulated penalties shall apply under this Section. EPA may, however, in its sole discretion, determine it is appropriate to forgive or

reduce stipulated penalties assessed by EPA under this Decree solely for such exceedences. If Work Defendants pay penalties assessed by a state or local agency for such an exceedance, the amount of such penalties paid will be credited toward any penalties assessed by EPA for the same instance of exceedance.

2. If EPA disapproves any Work, plans, reports (other than monthly progress reports, which are covered by Paragraph B above), or other items required to be submitted to EPA for approval pursuant to Section IX (Work to be Performed), Section XII (Quality Assurance/Quality Control), or Section X (Escrow Account), the Work Defendants shall have ten 10 days from the receipt of such disapproval to correct any inadequacies and resubmit the plan, report, or item for EPA approval unless a longer period of time is provided by Subparagraph A(12) of Section IX (Work to be Performed) with respect to Work. This Subparagraph C(2) does not apply to Project Proposals, as described in Appendix C.

3. Any disapprovals by EPA shall include an explanation of why the Work, plan, report, or item is being disapproved.

4. The Work Defendants must address each of EPA's comments and resubmit to EPA the previously disapproved plan, report, or item with any required changes within the deadline set forth herein.

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5. If any plan, report, or item is inadequate after resubmission, then the Work Defendants shall be deemed to be in violation of this Decree and subject to stipulated penalties as governed by this Section.

6. Except for the stipulated penalties specified in Paragraph B, above, the Work Defendants shall pay the following stipulated penalties for each failure to comply with the requirements of this Decree, including but not limited to all implementation schedules and performance and submission dates:

a. Class I Requirements

All Outlines
Preliminary Designs
Intermediate Designs
Prefinal Designs
All Construction Inspections
Draft Construction Close-out Reports
Emergency Repair Close-out Reports
Discharge or Emission Exceedances

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Period of Failure to Comply	Penalty per Day per Event
1st though 30th day	$2,500

If an Outline or Report is for a Class II Requirement:

31st through 45th day	$10,000
46th day and beyond	$15,000

If a Design or Construction is for a Class II Requirement:

31st through 45th day	$5,000
46th day and beyond	$15,000

If an Outline, Design, Construction, or Report is for a Class III Requirement:

31st through 45th day	$15,000
46th day and beyond	$20,000

All other Class I Requirements:

31st day and beyond	$2,500

b. Class II Requirements

All Prefinal Plans
SCH/LMS Master Plan
Operations Manual
Transition Plan
Project Proposal Plan

Bench Scale Testing Plan
LTS Predesign Report
Final Construction Close-out Reports
Quarterly Escrow Reports required by Section X (Escrow Account)
Work Completion Report
Final Designs (other than LTS Final Design)
Untimely Commencement of Work

Period of Failure to Comply	Penalty per Day per Event
1st though 15th day	$3,000
16th through 30th day	$7,000
31st through 45th day	$10,000
46th day and beyond	$15,000

c. Class III Requirements

Safety, Health, and Emergency Response Plan
Quality Assurance/Quality Control Plan
Interim Budget and Operations Plan
Final LTS Close-out Report
LTS Final Design

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Period of Failure to Comply	Penalty per Day per Event
1st though 15th day	$5,000
16th through 30th day	$10,000
31st through 45th day	$15,000
46th day and beyond	$20,000

d. All deliverables and Work not identified in Paragraph B or Subparagraph (6)(a) through (6)(c) of this Paragraph C shall be Class II Requirements.

D. Stipulated Penalties for Special Circumstances

1. If EPA determines that Work Defendants have suspended performance of all or a portion of the Work, unless otherwise allowed by the terms of this Decree, they shall be deemed to be in violation of this Decree and shall pay a stipulated penalty of $3,000,000, in lieu of other stipulated penalties for that specific violation.

2. In the event that EPA determines that Work Defendants have failed to perform any material portion of the Work or have performed any portion of the Work in a substantially inadequate or substantially untimely manner, or in the event of an imminent and substantial endangerment to public health or welfare or the environment resulting from the performance of, or failure to perform, Work by Work Defendants, Work Defendants shall pay a

stipulated penalty of $1,000,000, in lieu of other stipulated penalties for that specific violation.

3. The costs incurred by EPA resulting from an EPA determination under Subparagraphs 1 and 2 of this Paragraph D shall not be allocable against the funding limitations of Paragraph C of Section IX (Work to be Performed), as provided in Paragraph B of Section XIX (Reimbursement of Future Response and Oversight Costs).

E. Stipulated Penalties for Cash Defendants

Each Cash Defendant's obligation for payment of stipulated penalties shall be limited to its obligation to make payments pursuant to Section VIII (Payments by Cash Defendants), Section X (Escrow Account) and Attachment A to this Decree. The amount of the penalties for any untimely payment or payment of less than the full amount due under this Decree shall be $25,000 per day. Payments shall be made in accordance with Paragraph A of this Section.

XXIII. FORCE MAJEURE

For purposes of this Decree, force majeure is defined as any event arising from causes beyond the control of the Work Defendants, or their contractors, subcontractors or consultants which delays or prevents the performance of any obligation under this Decree, and could not have been overcome or prevented by the

Work Defendants' due diligence efforts. The Work Defendants shall have the burden of proving that the delay was caused by circumstances beyond the control of the Work Defendants.

When circumstances are occurring or have occurred that delay or may delay the completion of any phase of the Work, and the Work Defendants wish to invoke the provisions of this Section, the Work Defendants shall, as soon as possible, notify EPA's Project Coordinator orally and shall, within seven (7) calendar days of oral notification to EPA, notify the EPA and the State Project Coordinators in writing of the anticipated length and cause of the delay, and to the extent possible, the following: which of the tasks are directly affected by the delay; the measures taken and/or to be taken to prevent or minimize the delay; and the timetable by which the Work Defendants intend to implement these measures. Failure of the Work Defendants to comply with the notice requirements of this Section shall constitute a waiver of that claim of force majeure.

Force majeure shall not include increased costs or expenses of any of the Work to be performed under this Decree, nor the financial inability of any of the Work Defendants to perform such Work, nor the failure of Work Defendants to make timely application for any required permits or approvals, and to provide all information required therefor in a timely manner. The EPA shall determine whether the event constitutes force majeure.

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If EPA determines that the event did not constitute force majeure, and the delay was not beyond the control of the Work Defendants, this delay shall constitute non-compliance with the Decree, and penalties shall accrue from the time of noncompliance. If the EPA determines the event does constitute force majeure, it shall, in consultation with the Work Defendants, determine the appropriate modification to the schedules in the Plans. No deadline shall be extended beyond that period of time which is necessary to complete the activities with the least amount of delay possible. The Work Defendants shall adopt all practicable measures to avoid or minimize delay.

If the EPA and the Work Defendants cannot agree as to whether the reason for the delay was a force majeure event, the determination of the EPA shall control. If the Work Defendants dispute this determination, the dispute shall be resolved by the procedures outlined in Section XXIV (Dispute Resolution) of this Decree.

The Cash Defendants shall not invoke the provisions of this Section.

XXIV. DISPUTE RESOLUTION

As required by Section 121(e)(2) of CERCLA, the United States, EPA, the State and the Work Defendants shall attempt to resolve expeditiously and informally any disagreements arising

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under or from the implementation of this Decree or any Work required hereunder.

If a dispute arises with respect to the meaning or application of this Decree, it shall in the first instance be the subject of informal good faith negotiations between EPA and the Work Defendants, pursuant to Paragraph B of this Section. The State may participate in these negotiations, consistent with the provisions of Paragraphs A and D of Section XXXIV (State and Local Agency Participation). In the event that the parties concerned cannot resolve any dispute arising under this Decree, then the interpretation advanced by EPA shall be considered binding unless the Work Defendants invoke the dispute resolution provisions of this Section. The Work Defendants' decision to invoke dispute resolution shall not constitute a force majeure under Section XXIII (Force Majeure), herein. The Work Defendants reserve the right to dispute a determination regarding whether a force majeure has occurred.

A. Notice

If the Work Defendants raise a good faith objection to any EPA notice of disapproval, determination of inadequacy, or other decision made pursuant to this Decree, or if the Work Defendants conclude that EPA and the Work Defendants have otherwise reached an impasse with regard to the requirements of this Decree, the Work Defendants shall orally notify EPA immediately of their objections. The Work Defendants shall subsequently provide

written notice to EPA and the State within seven (7) calendar days of oral notification.

B. Informal Resolution Mechanism

EPA and the Work Defendants shall then have fourteen (14) additional calendar days from the receipt by either party of the written notification to reach agreement. DHS may participate in these negotiations, consistent with the provisions of Paragraphs A and D of Section XXXIV (State and Local Agency Participation). If possible, such disputes shall be resolved by informal telephone conferences. Any Party may also request that the Parties confer to resolve the dispute through an informal conference, to be held within this fourteen (14) calendar day period. As appropriate, and upon agreement of the EPA, the State and the Work Defendants, they may use independent technical experts to assist in the resolution of solely technical disputes, provided however that there is no written finding or determination made by such technical expert. No product or recommendation resulting from this consultation shall be offered in evidence for any purpose in any proceeding. The Work Defendants agree to pay for such independent experts and any such costs shall be excluded from the limitations on expenditures set forth in Paragraph C of Section IX (Work to be Performed).

At the end of this fourteen (14) calendar day period, or within seven (7) calendar days after an informal conference is held, whichever is later, EPA shall provide the Work Defendants

and the State a written statement of its decision signed by the Superfund Enforcement Branch Chief, or his/her designee other than the Project Coordinator, and the Work Defendants shall implement the directives contained in such decision, subject to the provisions of Paragraph C of this Section. If the Work Defendants refuse to implement such directives, EPA or the State may elect to perform such work, pursuant to Section XVIII (Reservation of Rights), infra. If Paragraph C of this Section is invoked, Plaintiffs may also elect to perform the work required by the disputed directive, as provided in Section XVIII (Reservation of Rights), and subject to Paragraphs A or B of Section XIX (Reimbursement of Future Response and Oversight Costs) and Section XXII (Stipulated Penalties).

C. Judicial Resolution

In the event that the dispute cannot be resolved by the informal negotiation procedures outlined in Paragraphs A and B above, and should the Work Defendants choose not to follow the EPA position, the Work Defendants may file with the Court a petition which shall describe the nature of the dispute and include a proposal for its resolution. Work Defendants may not file such a petition until informal negotiations pursuant to Paragraph B, supra, are completed. The filing of a petition asking the Court to resolve a dispute shall not of itself extend or postpone the Work Defendants' obligations under this Decree with respect to the disputed issue, or stay the provisions of Section XXII (Stipulated Penalties), except that the EPA will not

demand payment of penalties accrued until completion of the dispute resolution process.

Unless the Court establishes a different period for response, Plaintiffs shall have thirty (30) days to respond to the petition. In a dispute where the Work Defendants allege delay attributable to force majeure, the Work Defendants shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by circumstances beyond their control which could not have been overcome by due diligence, that the duration of the delay is or was warranted under the circumstances, and that the Work Defendants complied with the notice requirements of Section XXIII (Force Majeure). In proceedings on any dispute relating to the selection, technique, cost effectiveness or adequacy of any aspect of the Work and in any other dispute subject to CERCLA Section 113(j)(2), 42 U.S.C. § 9613(j)(2), in considering the Work Defendants' objections, the Court shall uphold EPA's decision unless the Work Defendants can demonstrate, on the administrative record, that EPA's decision was arbitrary and capricious or otherwise not in accordance with law. In other disputes, except as specified above, the appropriate standard of judicial review and scope of materials to be considered by the Court shall be determined by the Court. In any proceedings on a dispute, Work Defendants shall bear the burden of coming forward with evidence and of persuasion on factual issues.

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If the Court finds that the Work Defendants have not satisfied their burden, the Work Defendants shall transmit payment of all penalties which have accrued during the dispute, plus interest at the rate specified in Section 107(a) of CERCLA, to the Hazardous Substance Superfund, within fifteen (15) working days of resolution of the dispute. The Work Defendants shall then implement the disputed matter as resolved and perform the work which was the subject of the dispute, if required. The appropriate plans should be amended to reflect the resolution of the dispute.

In any dispute in which the Work Defendants prevail: (1) the deadlines for any affected deliverables shall be extended to account fully for any delays attributable to the dispute resolution procedures; and (2) any penalties which would otherwise accrue for violation of any affected deliverable shall be waived.

XXV. FORM OF NOTICE

All communications between the Work Defendants or their Contractor(s), and EPA and the State made pursuant to this Decree shall be sent to at least the Work Defendants, EPA, and the State. Subject to Paragraph G of Section XVI (Data Exchange), any Cash Defendant may obtain upon written request, a copy of any or all such communications. The cost of copying any such material shall be borne by the Cash Defendant making the request.

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When notification to or communication with the United States, EPA, the Work Defendants, or the State is required by the terms of this Decree, it shall be in writing, postage prepaid, and addressed as follows:

As to the United States:

Chief
Environmental Enforcement Section
Land and Natural Resources Division
Department of Justice
10th and Pennsylvania Avenue, N.W.
Washington, D.C. 20530

As to EPA:

EPA Project Coordinator - OII Site
Superfund Enforcement Section (T-4-2)
U.S. Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

Assistant Regional Counsel - OII Site
Office of Regional Counsel
U.S. Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

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As to the Work Defendants:

Project Co-Chairmen
c/o Boone & Associates
Suite 204
901 Corporate Center Drive
Monterey Park, CA 91754

David A. Giannotti, Esq.
McKenna, Conner & Cuneo
444 South Flower Street
Los Angeles, CA 90071

J. Jeffrey Zimmerman, Esq.
Occidental Petroleum Corporation
1747 Pennsylvania Ave. N.W.
Washington, D.C. 20006

OII Work Defendant Project Coordinator
c/o Boone & Associates
Suite 204
901 Corporate Center Drive
Monterey Park, CA 91754

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As to the State:

OII Project Coordinator
Department of Health Services
Toxic Substances Control Division
1405 San Fernando Road, Suite 300
Burbank, CA 91504

XXVI. MODIFICATION

Except as provided for in this Decree, there shall be no modification of this Decree without written approval of EPA, the State, the Defendants and the Court, or as ordered by the Court.

XXVII. ADMISSIBILITY OF DATA

For the purpose of this action only, the Parties waive any evidentiary objection as to the authenticity of data gathered, generated, or evaluated by any Party in the performance or oversight of the Work under this Decree that has been verified using the Quality Assurance and Quality Control procedures specified in Section XII (Quality Assurance and Quality Control).

The Parties also waive any objections to the introduction of such data based on hearsay for the purpose of this action only.

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XXVIII. DEFENDANTS' RIGHT OF CONTRIBUTION AND INDEMNITY AND COVENANT NOT TO SUE EACH OTHER

A. Each Defendant shall retain all rights under statutory or common law to seek contribution or indemnification against any and all other persons or entities not party to this Decree.

B. Except as provided in this Paragraph, to the extent that any Defendant has complied with its obligations hereunder, and, as among the Work Defendants only, with its obligations under any separate agreement allocating the costs hereof, no rights as to matters addressed in this Decree are retained against such Defendant by any other Defendant and such rights are hereby expressly waived, released and discharged with regard to such Defendant. Each Cash Defendant specifically retains any and all rights to seek indemnification from the Work Defondants as provided in Paragraph B of Section XXXVI (Indemnification).

C. For and in consideration of the mutual covenants and promises of the Defendants made herein and, as to the Work Defendants only, in any separate agreement allocating the costs hereof, each Defendant hereby covenants not to sue or otherwise assert any claim against any other Defendant for reimbursement of any payment made pursuant to this Decree, except to enforce any allocation of costs made pursuant to such separate agreement.

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XXIX. CONTRIBUTION PROTECTION

Pursuant to Sections 113(f)(2) and 122(h)(4) of CERCLA and other applicable federal and state law, Defendants shall not be liable to other persons or entities for contribution claims regarding Covered Matters. Nothing in this Section shall constitute or be construed as releasing or providing any Covenant Not to Sue or Contribution Protection with respect to Covered Matters to any person not a Defendant or to any Defendant which has defaulted on its obligations under this Decree. The United States and the State expressly reserve the right to bring any appropriate action against persons and entities not signatories hereto to recover response costs incurred by the United States and the State.

Each Cash Defendant's right to Contribution Protection under this Section shall remain in effect against all other persons provided it has not defaulted on any obligation under this Decree, whether or not any other Defendant has fully performed its obligations under this Decree. Each Work Defendant's right to Contribution Protection under this Section shall remain in effect against all other persons provided Work Defendants have not defaulted on any obligation under this Decree and that such Work Defendant has not defaulted on its obligations arising out of this Decree, whether or not any or all Cash Defendants has fully performed its obligations under this Decree.

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XXX. COVENANT NOT TO SUE

A. Except as provided in Paragraph C, upon the approval by EPA of the final Work Completion Report and certification of completion of the Work, including operations, maintenance and monitoring, the United States, EPA, the State, the California Hazardous Substance Account, and the Attorney General of California (with respect to the authority under California Government Code §§ 12600 - 12612) covenant not to sue the Work Defendants with regard to the Covered Matters which are performed satisfactorily by Work Defendants. "Covered Matters" shall mean those conditions which the alternatives selected in the RODs (attached as Appendices A and B) are designed to remedy, the Work implemented under Section IX (Work to be Performed), oversight costs associated with the performance of that Work and for all past response costs, including interest accrued thereon, incurred by the United States, the State and the California Hazardous Substance Account up to June 1, 1988. Covered Matters specifically do not include removals, remedial actions which will be implemented pursuant to the final remedy, the gas control and any future operable unit(s), or any environmental condition which is identified in the RI/FS (except to the extent those removals, remedial actions, or those environmental conditions are already covered by Appendices A or B or the Work). The Parties also agree that remedial actions for groundwater contamination, if any, are not Covered Matters under this Decree. This Section is not, and shall not be construed as, a Covenant Not to Sue any Work Defendant that does not fulfill its obligations arising out

of this Decree, or any other person or entity not a Party to this Decree. Under the provisions of Section IV (Binding Effect), Work Defendants shall be jointly and severally responsible for the performance of the Work Defendants' obligations outlined in this Decree; provided however, that their rights to a Covenant Not to Sue under this Decree shall not be affected by the performance or nonperformance of any obligation by any Cash Defendant under this Decree.

B. Except as provided in Paragraph C, upon receipt of all payments required of each Cash Defendant under this Decree, the United States, the State, the California Hazardous Substance Account, and the Attorney General of California (with respect to the authority under California Government Code §§ 12600 - 12612) covenant not to sue that Cash Defendant for Covered Matters. Any Cash Defendant can obtain the full benefit of this Covenant Not to Sue by prepayment, at any time, of the balance of the total amount due under Attachment A, Schedule 2. This Covenant Not to Sue shall remain in effect with respect to any Cash Defendant whether or not any other Defendant fulfills its obligations under this Decree.

C. Defendants are expressly not released from, and the provisions of Paragraphs A and B of this Section shall not apply to, any matter which is not a Covered Matter, including the following claims:

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1. Any claim based on a failure of any Defendant to meet its obligations under this Decree;

2. Any other claims of the United States, the State, or the California Hazardous Substance Account for any other costs or actions necessary at the OII Site which are not covered pursuant to the terms of this Decree;

3. Claims based on the Defendants' liability arising from the past, present, or future disposal of hazardous substances not associated with the OII Site at other disposal sites;

4. Any liability of Work Defendants for damage to federal or state property located any place that the Work is being performed;

5. Claims based on criminal liability;

6. Claims based on liability for damage to natural resources as defined in CERCLA;

7. Claims based on liability for future monitoring or oversight expenses incurred by the United States or the State except as those expenses are Covered Matters; or

8. Liability on the part of the Work Defendants for any violations of federal or state law which arises from implementation of the Work.

D. The Defendants hereby release and covenant not to sue the United States, including any and all departments, agencies, officers, administrators, and representatives thereof, for any claim, counter-claim, or cross-claim asserted, or that could have been asserted prior to the effective date of this Decree arising out of or relating to the OII Site, except for any liability arising under Sections 107 or 113 of CERCLA relating to the OII Site for any federal entity that has not resolved its liability for Covered Matters under the provisions of this Decree or its equivalent. Defendants also release and covenant not to sue the State, including any and all officers, administrators, and representatives thereof, for any claim, counter-claim, or cross-claim asserted, or that could have been asserted prior to the effective date of this Decree arising out of or relating to the OII Site.

E. Nothing in this Decree shall constitute or be construed as a release or a covenant not to sue regarding any claim or cause of action against any person, as defined in Section 101(21) of CERCLA or California Health and Safety Code, § 25319, or other entity, not a signatory to this Decree for any liability it may have arising out of or relating to the Site.

F. The Parties to this Decree agree that while the United States, EPA and the State may support the applicability of Section XXIX (Contribution Protection) based upon the existence of this Decree, neither the United States, nor EPA nor the State shall be under any obligation to assist the Defendants in any way

in defending against suits for contribution brought against the Defendants which allege liability for matters covered by this Covenant Not to Sue by persons or entities that have not entered into this settlement.

G. The Covenants Not to Sue under Paragraphs A, B and D contained in this Section shall also apply to:

1. Each Defendant's directors, officers and employees as to their actions in that capacity for that Defendant, and

2. Each Defendant's successors and assigns except to any liability of such successor or assign which arose independently of the liability of that Defendant.

XXXI. WAIVER OF CLAIM-SPLITTING DEFENSE

All Parties recognize and acknowledge that the settlement embodied in this Decree is only a partial resolution of issues related to the remediation of conditions at the Site. Defendants hereby waive the defenses of res judicata, collateral estoppel, and claim-splitting by the Plaintiffs, only with respect to the Plaintiffs' rights to pursue subsequent litigation regarding Defendants' responsibility for phases of Site work and costs not covered by this Decree.

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XXXII. COMMUNITY RELATIONS

The Work Defendants shall cooperate with EPA and the State in providing information to the public. As requested by EPA or the State, the Work Defendants shall participate in the preparation of all appropriate information disseminated to the public and in public meeting(s) which may be held or sponsored by EPA or the State to explain activities at or concerning the Site relative to the Work required under the terms of this Decree. As appropriate, EPA or the State may seek consultation with and assistance from Work Defendants in the preparation of information disseminated to the public and in public meeting(s) which may be held or sponsored by EPA or the State to explain activities at or concerning the Site.

XXXIII. LODGING AND PUBLIC PARTICIPATION

Pursuant to Section 122(d) of CERCLA, 42 U.S.C. § 9622(d), this Decree will be lodged with the Court for thirty (30) days, and the United States shall publish a Notice of Availability of review to allow public comment prior to entry by the Court. The United States will file with the Court a copy of any comments received and the responses of the United States to such comments.

No Party shall be bound by modifications to this Decree without its prior written consent, and consent to this Decree is not consent to such modifications.

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XXXIV. STATE AND LOCAL AGENCY PARTICIPATION

A. Lead Agency

EPA is and shall be the lead agency, as defined in the NCP, for the activities within the scope of this Decree.

B. Interagency Committee

The Operating Industries Interagency Committee ("IAC") consists of interested state and local agencies. The IAC meets on a regular basis to exchange information on agency regulatory activities at the OII Site and reviews and comments on remedial and response actions undertaken at the Site. The IAC has a Technical Subcommittee ("IAC Technical Subcommittee") which exchanges technical information and which is primarily responsible for reviewing and commenting on the remedial and response actions.

C. Role of Interagency Committee

The Work Defendants shall make available copies of significant deliverables in this Decree, such as Plans, Designs and the Operations Manual, to the members of the IAC for review. EPA will provide Work Defendants with a current mailing list for IAC members prior to the effective date of this Decree. After the IAC Technical Subcommittee and any other interested IAC members have had the opportunity to review the deliverables, they

shall have the opportunity to meet with EPA and the State to discuss the deliverables and prepare collaborative comments. These collaborative comments shall be submitted to the Work Defendants as EPA comments. The Work Defendants shall respond to the EPA comments as may be required by the terms of Section IX (Work to be Performed) and subject to Work Defendants right under Section XXIV (Dispute Resolution).

D. EPA will consult with the State before approving any significant deliverables required to be submitted by the Work Defendants under this Decree. EPA will also consult with the State before determining whether a force majeure event beyond the control of the Work Defendants has occurred, and whether the Work Defendants have substantially complied with or completed the terms of this Decree. EPA's failure to consult with the State will not relieve the Work Defendants of any obligation to comply with the requirements of this Decree. If it is not practicable for EPA to consult with the State, EPA shall notify the State of its approval or determination as soon as possible. The State's failure to object in a timely manner to an approval, determination, or other decision of EPA made under this Decree shall constitute concurrence with EPA.

XXXV. CONSISTENCY WITH THE NCP

The United States, the State and the Defendants agree that the Work, if performed in accordance with the requirements of this Decree, is consistent with the provisions of the National

Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300, pursuant to Section 105 of CERCLA 42 U.S.C. § 9605.

XXXVI. INDEMNIFICATION

A. The Work Defendants shall indemnify the United States with respect to EPA, USACE and the U.S. Coast Guard, and the State and save and hold the United States with respect to EPA, USACE and the U.S. Coast Guard, and the State, and any of their divisions, departments, agents and employees harmless for any and all claims or causes of action arising from any injuries or damages to persons or property resulting from any negligent, wanton or willful acts or omissions of the Work Defendants, or their successors, assigns, contractors, subcontractors, or any other person acting on their behalf in carrying out any activities pursuant to the terms of this Decree. This indemnification does not extend to that portion of any such claim or cause of action attributable to the negligent, wanton or willful acts or omissions of the United States with respect to EPA, USACE, or the U.S. Coast Guard, or the State or their contractors, subcontractors or any other person acting on their behalf in carrying out activities at the Site. The United States and the State shall notify Work Defendants of any such claims or actions within thirty (30) days of receiving notice that such a claim or action has been filed. The Work Defendants have the right to intervention under Section 113(i) of CERCLA, if

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applicable, and to seek intervention under the provisions of F.R.Civ. P. 24 and California Code of Civil Procedure § 387.

Neither Plaintiffs nor Cash Defendants are parties to any contract entered into by the Work Defendants at the Site.

B. Work Defendants agree to indemnify and hold Cash Defendants and their directors, officers and employees harmless from damages or claims arising as a result of negligent performance of the Work, or of negligent, willful, or wanton failure to perform the Work by the Work Defendants or their contractors or subcontractors. This indemnity and hold harmless as to Cash Defendants shall not apply to any Cash Defendant which is not in compliance with the terms of this Decree. Furthermore, this indemnity and hold harmless shall not include any damages or claims arising as a result of any negligent, willful or wanton act or omission of any Cash Defendant or its directors, officers or employees, nor shall it include any damages or claims which arise or result from conditions at the Site which are not the result of the Work performed under this Decree by the Work Defendants or their contractors or subcontractors. Without limiting the foregoing, the Work Defendants' obligation as to the Cash Defendants shall not apply to any claim or cause of action arising prior to the effective date of this Decree or to the extent of any liability attributable to any third party, including EPA, the State or any Cash Defendant. Any Cash Defendant shall notify Work Defendants of any such claim or action within thirty (30) days of receiving notice that such a

claim or action has been filed. Work Defendants shall have the right to join in the defense of all claims or causes of action within the scope of this indemnification. Further, unless Work Defendants refuse to join in the defense as herein provided, Cash Defendants shall not take or fail to take any action which would prejudice Work Defendants' rights, privileges, defenses, or claims, and shall not settle any claim or cause of action within the scope of this indemnification without the consent of the Work Defendants. Nothing in this Paragraph B shall be construed to affect or pertain to the indemnification of the United States or State, as set forth in Paragraph A of this Section.

XXXVII. CLAIMS AGAINST THE FUND

Nothing in this Decree shall be deemed to constitute a preauthorization of a CERCLA claim within the meaning of Sections 111 or 112 of CERCLA or 40 C.F.R. § 300.25(d). In consideration of the entry of this Decree, Defendants agree not to make any claims pursuant to Section 112 or Section 106(b)(2), 42 U.S.C. §§ 9612, 9606(b)(2), or any other provision of law directly or indirectly against the Hazardous Substance Superfund, or make other claims against the United States or the State for those costs expended in connection with this Decree.

XXXVIII. CONTINUING JURISDICTION

The Court specifically retains jurisdiction over both the subject matter of and the Parties to this action for the duration

of this Decree for the purposes of issuing such further orders or directions as may be necessary or appropriate to construe, implement, modify, enforce or terminate the terms of this Decree or for any further relief as the interest of justice may require.

XXXIX. REPRESENTATIVE AUTHORITY

Each undersigned representative of the Parties to this Decree certifies that he or she is fully authorized by the Party to enter into and execute the terms and conditions of this Decree, and to legally bind such Party to this Decree.

XL. EFFECTIVE DATE

This Decree is effective upon the date of its entry by the Court.

XLI. TERMINATION AND SATISFACTION

Upon completion of the Work to be performed pursuant to this Decree, or upon occurrence of an event terminating Work Defendants' obligations, as described in Paragraph C of Section IX (Work to be Performed), Work Defendants shall submit to Plaintiffs a written certification that the Work has been completed in accordance and in full compliance, or that they have otherwise satisfied their obligations in accordance and in full compliance, with this Decree. Within sixty (60) days of receipt of such certification, EPA shall approve or disapprove the

certification subject to the provisions of Paragraphs A and D of Section XXXIV (State and Local Agency Participation). The provisions of this Decree, including Work Defendants' obligations for Covered Matters, other than Section XVII (Retention of Records), shall be deemed satisfied upon the Work Defendants' receipt of such written approval from EPA; provided that termination of this Decree shall not alter the provisions of Section XVIII (Reservation of Rights), Section XXIX (Contribution Protection), Section XXX (Covenant Not to Sue) and such other continuing rights and obligations of Work Defendants under this Decree.

Upon full payment of all its obligations under Section VIII (Payments by Cash Defendants), Section X (Escrow Account) and Attachment A, each Cash Defendant shall have satisfied its obligations for Covered Matters under this Decree, and this Decree shall be terminated as to that Cash Defendant, provided that the termination shall not alter the provisions of Section XVIII (Reservation of Rights), Section XXIX (Contribution Protection), Section XXX (Covenant Not to Sue) and such other continuing rights and obligations of that Cash Defendant under this Decree.

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XLII. SECTION HEADINGS

The section headings set forth in this Decree and its Table of Contents are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Decree.

XLIII. COUNTERPARTS

This Decree may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

SIGNED and ENTERED this 7 day of December, 1988.

Marilyn R. Patel
UNITED STATES DISTRICT JUDGE

ATTACHMENT A

SCHEDULE 1

NAME OF COMPANY	EPA PAYMENT	STATE PAYMENT
Aluminum Company of America	$ 699,200	$ 6,080
American Can/Primerica Corporation	95,087	827
American National Can	5,715,863	49,703
Anchorlok Corp. for Anchorlok Lear Siegler Corp. and Royal Industries, Inc.	292,100	2,540
Aratex Services, Inc., for Red Star Industrial Service	146,050	1,270
Armco Inc.	109,250	950
Beatrice/Hunt-Wesson, Inc.	196,650	1,710
BJ-Titan Services Company, for B.J. Services Equipment Company	81,650	710
Borden, Inc.	94,300	820
CalMat Co. for Conrock Co.	100,050	870
Champion International Corporation for St. Regis	90,850	790
Coca-Cola Bottling Company of Los Angeles	92,000	800
The Coca-Cola Company	14,950	130
Davidson P.W.P.	96,600	840
Department of Water and Power of the City of Los Angeles	437,000	3,800
Edgington Oil	289,800	2,520
Emerson & Cuming Inc.	177,100	1,540

The Firestone Tire & Rubber Company	104,650	910
Flint Ink Corporation	197,800	1,720
FPCO Oil & Gas Co. for Petro-Lewis Corporation	98,900	860
Franciscan Ceramics, Inc.	184,000	1,600
General Latex and Chemical Corporation	110,400	960
Hydril Company	88,550	770
International Extrusion Corporation	85,100	740
International Paper Company	158,700	1,380
Interpace Corporation	745,200	6,480
Kiewit Continental Inc. for Continental Can	2,251,700	19,580
Lockheed Aeronautical Systems Company a division of Lockheed Corporation	815,350	7,090
Longview Fibre Company	80,500	700
Luxfer USA Limited	119,600	1,040
Maytag Corporation for Gaffers & Sattler	141,450	1,230
McAuley LCX Corporation	126,500	1,100
Mitchell Energy Corporation	317,400	2,760
Owens-Illinois, Inc.	90,850	790
Quantum Chemical Corporation, Emery Division	400,200	3,480
Reichhold Chemicals, Inc.	261,050	2,270
Reisner Metals, Inc.	108,100	940

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7Up/RC Bottling Companies of Southern California	66,250	750
Soule'-Arnon Liquidating Agency	1,518,000	13,200
Southwest Processors, Inc./Ameroil*	444,015	3,861
Stroh Container Company for Schlitz Brewing Company	320,850	2,790
SupraCote, Inc.	98,900	860
The Times Mirror Company for Los Angeles Times and Times Mirror Press	171,350	1,490
Tree Island Industries Ltd.	113,850	990
TRW Inc.	209,300	1,820
Union Carbide Corporation	34,500	300
United Air Lines, Inc.	125,350	1,090
United Parcel Service of America, Inc.	101,200	880
United States Brass Corporation for Eastman Central	323,150	2,810
Van Waters & Rogers	96,600	840

* For purposes of Paragraph H of Section XVIII (Reservation of Rights) the amount paid by Southwest Processors, Inc. for Southwest Processors, Inc. and Ameroil shall be considered to be $403,650 to EPA and $3,510 to the State.

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All checks should reference the OII site, and be addressed to:

For EPA:	For the State:
(checks should be made out to: "OII Steering Committee Escrow Account--Consent Decree I (Cash Fund)") and sent to:	California Department of Health Services Toxics Substances Control Division
Attention: Department Manager Institutional Custody Services First Interstate Bank of California	P.O. Box 942732 Sacramento, CA 94234-7320
707 Wilshire Boulevard, W9-4 Los Angeles, California 90017	

These funds shall be paid out and administered according to the provisions of Section IX (Work to be Performed), Section X (Escrow Account), Section XIX (Reimbursement of Future Response and Oversight Costs) and Section XX (Reimbursement of Past Costs).

A copy of all transmittal letters and a copy of each check submitted under Schedules 1 and 2 of this Attachment shall be sent to the EPA, the State, and the Work Defendants' Project Coordinators.

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SCHEDULE 2

	Union Pacific Resources Co. for Champlin Petroleum Co.	Atlantic Richfield Co. including Anaconda American Brass	Exxon Corporation
Initial Payment to EPA:	$390,952.10	1,278,045.20	1,074,679.99
Payment to the State:	15,610.00	51,030.00	42,910.00
Year 1 Payment to EPA:	1,014,142.93	3,315,292.35	2,787,756.12
Year 2 Payment to EPA:	195,027.49	637,556.22	536,106.95
Year 3 Payment to EPA:	195,027.49	637,556.22	536,106.95

The initial payments to EPA and the payments to the State shall be made within thirty (30) days after the Cash Dufendants receive written notice of the entry of this Decree and Year 1, Year 2, and Year 3 payments shall be due twelve (12), twenty four (24), and thirty six (36) months thereafter. The checks should reference the OII Site, and be addressed to:

For EPA:

U.S. EPA - Region 9
Attn: Superfund Accounting
P.O. Box 360863 M
Pittsburgh, PA 15251

For the State:

California Department of Health Services
Toxics Substances Control Division
P.O. Box 942732
Sacramento, CA 94234-7320

A copy of all transmittal letters and a copy of each check submitted under Schedules 1 and 2 of this Attachment shall be sent to the EPA, the State, and the Work Defendants' Project Coordinators.

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ATTACHMENT B

Work Defendants:

Allied-Signal Inc. for Garrett Airesearch

American Airlines, Inc.

Bethlehem Steel Corporation

Betz Laboratories, Inc.

Borg-Warner Corporation for Byron Jackson Pump Division

Calgon Corporation/Calgon Vestal Laboratories

Carnation Company

Chevron Chemical Company

Chevron Pipe Line Co.

Chevron U.S.A. Inc.

Conoco Inc.

Cooper Drum Company for Superior Drum

Crowley Maritime Corporation on behalf of its wholly owned subsidiaries Crowley Towing & Transportation Co. and Crowley Environmental Services Corporation

Deft, Inc.

Delta Air Lines, Inc. for Western Airlines

Douglas Oil Company

Dunn-Edwards Corporation

The Flying Tiger Line Inc.

GATX Terminals Corporation

General Felt Industries, Inc., a division of Knoll International Holdings, Inc.

General Motors Company

Georgia-Pacific Corporation

Hughes Aircraft Company

Ingersoll-Rand Company for Proto Tool

Insilco Corporation for Sinclair Paint Company

Jaybee MFG

Kenosha Auto Transport Corporation

Lever Brothers Company, Inc.

Liberty Vegetable Oil Company

Long Beach Oil Development Company

Long Beach Unit, Wilmington Oil Field, California (City of Long Beach, Unit Operator-THUMS Long Beach Company, Agent for Field Contractor

Major Paint Company

Max Factor & Co.

Martin Marietta Corporation for Martin Marietta Carbon, Inc. and Commonwealth Aluminum Corporation

McDonnell Douglas Corporation for Douglas Aircraft

Menasco, Inc.

Mobil Oil Corporation including Superior Oil Company

NI Industries, Inc. for Norris, Inc.

NL Industries, Inc., for NL Metals

Occidental Petroleum Corporation

Parker-Hannifin Corporation for Bertea Corporation

PPG Industries, Inc.

The Procter & Gamble Manufacturing Company

Reynolds Metals Company

Safeway Stores, Incorporated

Santa Fe Energy Company/Chanslor Western Oil Development

Shell Oil Company

Southern California Edison

Southern California Gas

Sothern California Rapid Transit District

Southern Pacific Transportation Company

Southwestern Engineering Company

Sparkletts Drinking Water Corporation

Superior Industries International, Inc.

Sun Oil Company

Texaco Inc. including Richfield East Dome Unit and Signal Hill West Unit and subsidiaries

Transportation Leasing Company for The Greyhound Corp.

USG Corporation for Hollytex Carpet Mills

Union Oil Company of California

The Uniroyal Goodrich Tire Company

Welch's Overall Cleaning Co., Inc. for Welch's Industrial Uniform

Willamette Industries, Inc. for Western Kraft

Xerox Corporation

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ATTACHMENT C

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
1	Chevron USA/Gulf	12,258,402	5,219	37,650	14,056,802	7.722%
2	ARCO/Anaconda	7,777,751	11	2,595	9,288,682	5.103%
3	National Can	9,040,899	0	5,652	9,046,551	4.970%
4	Texaco Inc./Getty	6,912,203	741	12,933	8,779,521	4.823%
5	Exxon USA	7,808,532	0	2,725	7,811,257	4.291%
6	McDonnell Douglas Aircraft.	6,746,625	0	15,435	6,762,060	3.715%
7	Union Oil Co.	6,238,541	0	8,964	6,247,505	3.432%
8	Norris Inc.	4,722,520	3,000	93,821	5,581,172	3.066%
9	Sun Oil Co.	5,257,980	0	6,900	5,264,880	2.892%
10	Occidental Petroleum	4,470,580	0	500	4,471,080	2.456%
11	Mobil Oil Corp.	2,536,198	12	9,068	4,272,953	2.347%
12	So. Cal. Gas Co.	3,572,588	100	5,100	3,602,724	1.979%
13	Continental Can	3,557,855	0	6,480	3,564,335	1.958%
14	Routh Transportation/I.I. Corp.	1,775,130	0	350	3,521,119	1.934%
15	Shell Oil Co.	3,440,970	0	1,940	3,442,910	1.891%
16	Powerine Oil Co.	3,382,620	0	18,542	3,401,162	1.868%
17	Santa Fe Energy/C.W.D.D.	3,029,341	0	2,301	3,390,007	1.862%
18	Martin Mariette Alum Inc	3,079,120	0	10,805	3,089,925	1.697%
19	Del Amo Energ,	3,076,080	0	6,800	3,082,880	1.694%
20	Champlin Petroleum Co.	2,840,244	0	1,900	2,842,144	1.561%
21	Filtrol Corp	2,835,340	0	1,350	2,836,690	1.558%
22	Smith Tool	2,436,712	0	2,080	2,436,792	1.339%
23	Soule Steel	2,396,299	0	5,978	2,402,277	1.320%
24	Asbury Oil Co.	2,207,530	0	1,170	2,208,700	1.213%
25	Douglas Oil Co./Conoco	1,816,122	0	200	2,044,572	1.123%
26	Kay-Brunner Steel	1,756,210	0	400	1,756,610	0.965%
27	GMC	1,346,563	417	68,670	1,524,776	0.838%
28	Long Beach Oil Development	1,407,420	0	5092	1,412,512	0.776%
29	Rochelle Lab.	1,286,970	0	5,200	1,292,170	0.710%
30	Lockheed Acft.	1,282,200	0	7,900	1,290,100	0.709%
31	Beverly Hills Oil Assoc.	1,178,520	0	2,030	1,180,550	0.649%
32	Interpace Corp.	1,154,046	0	26,345	1,180,391	0.648%
33	ALCOA Vernon Works	1,104,485	0	1,470	1,105,955	0.608%
34	So. Cal. Chemical	924,700	0	62,000	986,700	0.542%
35	So. Cal. RTD	828,500	0	109,500	938,000	0.515%
36	De Menno-Kerdoon	907,200	100	300	932,508	0.512%
37	Jos. Schlitz Brewing Co.**	850,860	0	10,000	860,860	0.473%
38	Davis & Walker Wire	855,167	0	605	855,772	0.470%
39	Garrett Airesearch	854,694	0	590	855,284	0.470%
40	Argo Petroleum Corp.	842,982	0	600	843,582	0.463%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
41	Kaiser Steel Fontana Works	818,880	0	100	818,980	0.450%
42	API Inc.	788,466	0	500	788,966	0.433%
43	American Airlines	741,710	0	28,951	770,661	0.423%
44	Bell Labs Inc.	747,191	0	5,800	752,991	0.414%
45	Bethlehem Steel Corp.	732,860	0	4,830	737,690	0.405%
46	Sinclair Paints	734,860	0	100	734,960	0.404%
47	Leach Oil Co.	691,740	0	200	691,940	0.380%
48	Department of Water & Power	682,110	36	100	691,211	0.380%
49	Emery Industries	629,420	0	4,675	634,095	0.348%
50	So. Cal. Edison Co.	631,310	4	205	632,515	0.347%
51	Textile Rubber & Chemical Co.	620,210	0	70	620,280	0.341%
52	Kern Foods Inc.	605,976	0	200	606,176	0.333%
53	Marina Pacifica	596,694	0	100	596,794	0.328%
54	Reynolds Metals	585,082	20	435	590,521	0.324%
55	Herbell Oil Co.	582,750	0	100	582,850	0.320%
56	Steel Castings	565,090	0	280	565,570	0.311%
57	Calgon Corp.	533,400	0	0	533,400	0.293%
58	Martin Oil Service Co.	514,500	0	0	514,500	0.283%
59	Eastman Central	510,780	0	65	510,845	0.281%
60	Thums Long Beach	477,120	120	100	507,226	0.279%
61	Mitchell Energy Corp.	502,110	0	100	502,210	0.276%
62	Byron Jackson Pump Div.	498,426	0	370	498,796	0.274%
63	Proto Tools	485,310	0	100	485,410	0.267%
64	Ameroil	483,420	0	0	483,420	0.266%
65	Vernon Truck Wash	468,930	0	1,125	470,055	0.258%
66	Liberty Vegetable Oil Co.	461,386	0	45	461,431	0.253%
67	Xtra Energy	460,560	0	0	460,560	0.253%
68	Edgington Oil	458,220	0	0	458,220	0.252%
69	California Milk Producers	436,326	0	16,845	453,171	0.249%
70	Alex Foods Inc.	435,965	0	445	436,410	0.240%
71	Long Beach Naval Shipyard	416,100	0	600	416,700	0.229%
72	Ameritone Paint Corp./Trewax	271,428	0	0	416,298	0.229%
73	Reichhold Chemicals	413,310	0	0	413,310	0.227%
74	McMillan Oil Co.	386,556	0	200	386,756	0.212%
75	Ladish Pacific Div.	384,972	0	100	385,072	0.212%
76	Metlox Potteries	382,326	0	0	382,326	0.210%
77	Crowley Maritime Corp.	377,520	0	4350	382,070	0.210%
78	Menasco Inc.	374,810	0	3,800	378,610	0.208%
79	Hollytex Carpet Mills	372,078	0	220	372,298	0.205%
80	Xerox Corp.	358,450	0	1000	359,450	0.197%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
81	Wm. H. Hutchinson & Sons Serv.	344,710	0	0	346,710	0.190%
82	Major Paint & Varnish Co.	345,700	0	0	345,700	0.190%
83	Southern Pacific Transportation	334,599	0	5220	339,819	0.187%
84	TRW Cinch Graphik	330,806	0	300	331,106	0 182%
85	Superior Drum	325,520	0	4600	330,120	0.181%
86	Anchorlok Lear Siegler Corp.	327,222	0	60	327,282	0.180%
87	Container Corporation of Amer.	318,222	0	410	318,632	0.175%
88	S. Rose Cooperage	315,660	0	1,300	316,960	0.174%
89	ACI Container Co.	315,420	0	201	315,621	0.173%
90	Superior Industries	314,694	0	125	314,819	0.173%
91	Flint Ink Corp.	313,875	0	0	313,875	0.172%
92	Hunt-Wesson Foods, Inc.	310,380	0	100	310,480	0.171%
93	Franciscan	275,856	0	15905	291,761	0.160%
94	Emerson and Cuming, Inc.	279,720	0	40	279,760	0.154%
95	B & C Plating Company	271,950	0	100	272,050	0.149%
96	Los Angeles Times-Mirror Press	270,000	0	1800	271,800	0.149%
97	Crosby and Overton, Inc.	271,320	0	100	271,420	0.149%
98	PPG Industries, Inc.	268,380	0	0	268,380	0.147%
99	Bertea Corp.	266,267	0	150	266,417	0.146%
100	Western Airlines	251,370	0	10330	261,700	0.144%
101	Southwestern Engineering Co.	260,080	0	100	260,180	0.143%
102	Uniroyal Inc.	252,400	0	4500	256,900	0.141%
103	Seaboard Oil and Gas	254,730	0	135	254,865	0.140%
104	International Paper Co.	250,330	0	330	250,660	0.138%
105	Mechanical Metal Finishing Co.	244,430	0	425	244,855	0.135%
106	Witco Chemical Corp.	244,000	0	0	244,000	0.134%
107	Red Star Industrial Serv.	217,120	0	13700	230,820	0.127%
108	Gaffers and Sattler	225,486	0	50	225,536	0.123%
109	Carnation Co.	214,610	0	5060	219,670	0.121%
110	Welch's Industrial Uniform	213,790	0	4000	217,790	0.120%
111	Fletcher Oil & Refining Co.	214,200	0	0	214,200	0.118%
112	General Felt Industries, Inc.	213,578	0	265	213,843	0.117%
113	Western Kraft Corp.	202,410	0	11400	213,810	0.117%
114	Greyhound Lines	210,450	0	50	210,500	0.116%
115	HL Metals	207,480	0	0	207,480	0.114%
116	Union Pacific Railroad	200,760	0	200	200,960	0.110%
117	McAvity Oil Co.	199,920	0	0	199,920	0.110%
118	United Airlines	194,702	0	3000	197,702	0.109%
119	Gemini Ind. Inc.	186,980	0	7000	193,980	0.107%
120	Bernard Epps and Co.	192,360	0	610	192,970	0.106%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
121	Procter and Gamble	192,860	0	0	192,860	0.106%
122	Filon Div. of SOHIO Chem. Co.	192,570	0	200	192,770	0.106%
123	Continental Airlines	192,400	0	0	192,400	0.106%
124	Glasteel Ind. Laminates, Inc.	190,810	0	40	190,850	0.105%
125	Jaybee Manufacturing Co. Inc.	183,078	30	170	190,755	0.105%
126	Safeway Stores, Inc.	184,934	0	5550	190,484	0.105%
127	Flying Tigers, Inc.	188,036	0	2300	190,336	0.105%
128	Luzfer U.S.A. Limited	173,020	0	15500	188,520	0.104%
129	Capri Treatment Plant	174,370	0	8600	182,970	0.101%
130	Berwind Railway Ser. Co.	180,600	0	0	180,600	0.099%
131	Ameron Steel	179,720	0	50	179,770	0.099%
132	Blacktop Material Co.	179,550	0	0	179,550	0.099%
133	Tree Island Steel	179,410	0	125	179,535	0.099%
134	Zocky Foods Co.	178,190	0	250	178,440	0.098%
135	Anaheim Foundry	177,122	0	0	177,122	0.097%
136	Motor Processors, Inc.	176,370	0	0	176,370	0.097%
137	General Latex & Chemical Corp.	174,260	0	100	174,360	0.096%
138	Preco, Inc.	173,830	0	30	173,860	0.096%
139	Armco	172,720	0	0	172,720	0.095%
140	Reisner Metals, Inc.	171,150	0	0	171,150	0.094%
141	GATX Corp.	170,520	0	120	170,640	0.094%
142	Hi-Production Forge	168,204	0	65	168,269	0.092%
143	Dunn-Edwards Corp.	161,541	0	4660	166,201	0.091%
144	Hughes Aircraft	161,285	0	4875	166,160	0.091%
145	Firestone Tire and Rubber Co.	160,730	0	4700	165,430	0.091%
146	EXCO Products, Inc.	163,970	0	0	163,970	0.090%
147	Cooper and Brain Oil Co.	161,700	0	250	161,950	0.089%
148	Max Factor	146,301	0	14008	160,309	0.088%
149	United Parcel Ser. of America	159,460	0	0	159,460	0.088%
150	Conrock Co.	157,570	0	0	157,570	0.087%
151	Supracote, Inc.	156,915	0	255	157,170	0.086%
152	Petro-Lewis Corp.	156,340	0	120	156,460	0.086%
153	Todd Shipyard Corp.	156,106	0	268	156,374	0.086%
154	Southwest Processors, Inc.	155,400	0	0	155,400	0.085%
155	Amtrak - National RR Passenger	152,400	0	3000	155,400	0.085%
156	Van Waters and Rogers	153,300	0	0	153,300	0.084%
157	Davidson Panel	153,048	0	0	153,048	0.084%
158	Kenosha Auto Transport	152,880	0	0	152,880	0.084%
159	American Can/Primerica	151,970	0	25	151,995	0.083%
160	Precision Heat Treating Co.	150,800	0	55	150,855	0.083%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
161	Borden Chemical Co.	149,270	0	50	149,320	0.082%
162	Redi-Spuds of America	149,310	0	0	149,310	0.082%
163	Deft, Inc.	147,133	0	240	147,373	0.081%
164	Coca-Cola Bottling Co. of LA	144,858	0	0	144,858	0.080%
165	Owens-Illinois	144,420	0	130	144,550	0.079%
166	St. Regis Paper Co.	142,616	0	525	143,141	0.079%
167	United Foam	141,030	0	0	141,030	0.077%
168	Hydril Co.	140,550	0	0	140,550	0.077%
169	Georgia Pacific Corp.	139,310	0	330	139,640	0.077%
170	Lever Brothers	136,360	0	1460	137,820	0.076%
171	Seven-Up Bottling Co. of LA	135,730	0	0	135,730	0.075%
172	International Extrusion	134,820	0	190	135,010	0.074%
173	Royal Industries, Internat.	134,400	0	0	134,400	0.074%
174	Sparkletts Drinking Water Corp	133,547	0	400	133,947	0.074%
175	Langlois Flour	130,500	0	0	130,500	0.072%
176	B.J. Service Equipment Co.	128,730	0	180	128,910	0.071%
177	Longview Fibre Co.	127,890	0	225	128,115	0.070%
178	Capitol Metals Co., Inc.	126,140	0	100	126,240	0.069%
179	R & R Industrial Waste Haulers	105,635	0	7900	113,535	0.062%
180	Union Carbide Corp.	53,760	0	0	53,760	0.030%
181	CCA Co.	25,200	0	0	25,200	0.014%
182	Coca-Cola Company	24,458	0	0	24,458	0.013%
	total=	170,925,645	9,810	846,884	182,037,702	

** The volumes and % of total for #37 Jos. Schlitz Brewing Company should be 498630 gallons, 0 tons, 10,000 other, 508360 total volume converted to gallons and % total of 0.279% (based on 182,037,702 total volume). This corrects a clerical error made by the EPA in calculating their volumes listed above. For purposes of this decree and to avoid any changes to other parties as listed on this September 1, 1988 list, all percentages of the total shall continue to be based on the 182,379,702 gallon total. Therefore, the settlement amounts as calculated for all settling parties in this settlement are slightly less than would otherwise have been calculated but for this error.

*The volume is based on records obtained from Operating Industries, Inc., and is subject to change as more information is gathered.

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

**Texaco includes Getty (1,668,790 gals)
Chevron includes Gulf (452,010 gals)
Mobil includes Superior (1,724,636 gals)
Sante Fe Energy includes C.W.O.D. (358,360 gals)
Douglas includes Conoco (228,050 gals)
ARCO includes Aneconda (1,505,585 gals)
South Transportation includes I.T. Corp. (1,745,639 gals)
Ameritone Paint includes Trevax (144,870 gals)

APPENDIX C

OII Landfill

SCM/LMS

Scope of Work

APPENDIX C
OII LANDFILL
SCM/LMS
SCOPE OF WORK

August 18, 1988

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1.0 INTRODUCTION, INTENT AND OBJECTIVES

1.1 INTRODUCTION

1. This Scope of Work document summarizes the Site Control and Monitoring (SCM) and Leachate Management System (LMS) activities to be undertaken by the Work Defendants in compliance with this Decree.

2. The Work shall be consistent with the decisions set forth in the Records of Decision (RODs) presented in Appendices A and B and performed pursuant to Section IX (Work to be Performed) of this Decree. For purposes of this Scope of Work, the activities from the two RODs are functionally divided into the following two areas:

   - SCM includes control, maintenance, monitoring and improvements of the following elements
     - Gas Control.
     - Storm Water/Erosion Control
     - Landscaping/Irrigation.
     - Access Roads.
     - Fences.
     - Support Facilities and Utilities.
   - LMS includes control, maintenance, monitoring and improvements to the following functions:
     - Liquid Collection.
     - Interim Transport and Offsite Treatment and Disposal.
     - Pretreatment and Transport Piping.
     - Influent Storage and Liquid Treatment.
     - Effluent Storage and Transport.

   Initially, the liquids shall be hauled offsite for treatment and disposal. A major, planned LMS project will be to design and construct an onsite treatment system to handle all or most of the liquids.

3. The Scope of Work is presented in the following format:

   - The remainder of Chapter 1.0 discusses the intent and objectives for the SCM and LMS activities.
   - Chapter 2.0 provides a brief description of existing site facilities related to the SCM and LMS activities.
   - Chapter 3.0 discusses areas where integration is required between SCM and LMS activities, and with other activities at the site.
   - Chapter 4.0 provides the Scope of Work for Pretransitional and Transitional activities.

   - Chapters 5.0 and 6.0 provide the SCM and LMS Scopes of Work, respectively.
   - Chapter 7.0 discusses the Preliminary and Proposed Schedules and Proposed Budget for Work Defendants' Proposed Scope of Work
   - Chapter 8.0 describes deliverables which are required and procedures to be followed for their review.
   - Chapter 9.0 discusses the schedule for initiation

4. The objectives stated in this chapter indicate that a primary goal of the program shall be to "minimize" certain undesirable factors (e.g., minimize the uncontrolled release of landfill gas) and to "maximize" certain desirable conditions (e.g., maximize flare station efficiency) at the site. The terms minimum and maximum are used in the context of the existing site conditions and in the context of practical and feasible actions which can be undertaken as part of the focused SCM and LMS functions.

5. For activities set forth in this Scope of Work, the EPA Superfund Remedial Design and Remedial Action Guidance Document (OSWER Directive 9355.0-4A; dated June 1986), shall be followed as appropriate.

1.2 INTENT

1. It is the Work Defendants' intent that in addition to control, maintenance and monitoring, the SCM and LMS activities include certain upgrades which they believe will accelerate important environmental improvements for the site. These are identified in Table 5.2.

2. The EPA generally agrees with the Work Defendants that there are benefits which may be gained by accomplishing the proposed improvements as early as possible. However, the EPA cannot initially commit to approve specific improvements until: (1) appropriate justification studies have been completed, and (2) there is assurance that basic SCM and LMS activities during the initial five year period will be adequately accomplished with remaining "Work" Escrow Account funds pursuant to Paragraph C of Section IX (Work to be Performed) and Section X (Escrow Account) of the Decree.

3. In order to reflect the Work Defendants' intent and to allow improvement decisions to be made, it is agreed that Project Proposals (Subchapter 8.2) for proposed improvements shall be submitted as early as possible after the effective date. These Project Proposals will include cost-benefit data to allow the EPA and the Work Defendants to establish priorities and

schedules for completing all or a portion of the improvement activities. The actual work for each year will be determined as part of each annual SCM/LMS Master Plan revision (Subchapter 8.2).

1.3 SCM OBJECTIVES

1. This section summarizes objectives for each SCM activity. The topics are discussed in the following sequence:
   - Control.
   - Maintenance.
   - Monitoring.
   - Improvements.

2. The ROD for SCM (Appendix B) states that Applicable or Relevant and Appropriate Requirements (ARARs) identified are not currently being met, and one objective of the SCM activities, including improvements, is to approach or achieve these ARARs. The final remedy is intended to achieve these ARARs.

1.3.1 CONTROL

1. *Site control activities shall have the following functional objectives:*
   - Gas Control. Minimize the uncontrolled release of landfill gas from the site, and operate gas control systems to prevent or minimize underground fires, to the extent possible given the existing or improved conditions. This shall be accomplished by establishing goals and taking appropriate actions to:
     - Minimize surface gas emissions from the surface of the landfill.
     - Minimize offsite gas migration through subsurface soil.
     - Maximize flare station destructive removal efficiency.
     - Minimize subsurface fires.
   - Stormwater/Erosion Control. Provide effective surface water drainage on the OII site, so that infiltration and erosion are controlled and minimized. This shall be accomplished by establishing goals and taking appropriate actions to:
     - Minimize surface water infiltration.
     - Minimize soil/sediment transport off-site.
     - Minimize erosion.
     - Promptly repair erosion consequences.
   - Landscaping/Irrigation. Irrigate and maintain existing or improved site vegetation to minimize sheet erosion to the extent possible.

   - Access Roads. Provide all-weather access to critical parts of the site, maintain critical flow lines and grading plans, and maintain other site roads, as appropriate.
   - Fencing. Maintain a perimeter and interior fence which discourages unauthorized access to the site and facilities.
   - Support Facilities and Utilities. Provide support facilities and utilities to fulfill the control, maintenance and monitoring activities.

1.3.2 SCM WASTES

1. *SCM wastes generated shall be managed pursuant to Section IX (Work to be Performed) of* the Decree.

1.3.3 MAINTENANCE

1. Site features, including appurtenances, systems, support facilities, and related necessary offsite systems, facilities, or equipment shall be maintained to the extent required to fulfill the control objectives specified in Subchapter 1.3.1.

1.3.4 MONITORING

1. Monitoring of site features, including appurtenances, systems, support facilities, and related necessary off-site systems, facilities, or equipment shall be conducted as required to fulfill the control objectives specified in Subchapter 1.3.1. Also, monitoring of meteorological and geotechnical instruments shall be conducted as necessary to assist in decisions regarding maintenance actions and the design of improvements and to increase overall knowledge of site conditions. Additional monitoring procedures or equipment may become necessary during the course of the SCM activities. Activities may include monitoring of control parameters or system parameters, inspections of site conditions, and auditing of the SCM activities.

1.3.5 IMPROVEMENTS

1. Improvements are included within the overall scope of the SCM. Decisions regarding potential improvements shall be evaluated based on how well the improvement satisfies the following objectives:
   - Enhance level of site control and/or monitoring.
   - Expand control for a wider range of conditions.
   - Correct control deficiencies.

- Preclude control failures and site deterioration
- Minimize human health hazards
- Provide an acceptable level of control at a reduced cost
- Approach or achieve compliance with Federal, State, or local regulations, requirements, or formal policies
- Enhance the technical understanding of site conditions.
- Avoid unnecessary conflicts with probable final remedy components

Because this Decree includes funding limitations pursuant to Section IX (Work to be Performed) of the Decree as described in Subchapter 1.2, specific improvements shall be approved only when it is determined that the cost of that improvement would not eliminate funds required for basic SCM and LMS activities. Subchapter 8.2 describes the information required when an improvement is proposed.

2. The program includes annual updates to the SCM/LMS Master Plan and Operations Manual to reflect existing conditions and the actual work progress. Priorities for improvements shall be reevaluated each year and final decisions shall be made regarding improvement planning for the coming year, as part of the SCM/LMS Master Plan approval process.

3. It is anticipated that the majority of the Work Defendants' recommended improvements will be implemented during the first 3 years. This would allow the improvements to be completed as early as possible, but still allows for annual decisions to be made consistent with the available funds and the monitoring and maintenance history.

1.4 LEACHATE MANAGEMENT SYSTEM (LMS) OBJECTIVES

1. This section summarizes objectives for each LMS activity. The topics are discussed in the following sequence:
   - Liquid Collection.
   - Interim Transport and Offsite Treatment and Disposal.
   - Pretreatment and Transport Piping.
   - Influent Storage and Liquid Treatment.
   - Effluent Storage and Transport.
   - Maintenance and Monitoring.
   - Improvements.

1.4.1 LIQUID COLLECTION

1. Liquid control will minimize migration of leachate from the site to the extent possible with existing leachate management systems. This shall be accomplished by:
   - Minimizing production of leachate.
   - Minimizing leachate migration offsite.

   - Maximizing leachate collection system efficiency
   - Preventing onsite and offsite leachate seeps.
   - Preventing onsite and offsite contaminated liquid spills

   Other liquid streams (e.g., condensate, decontamination waters) will be minimized without adversely affecting control objectives.

1.4.2 INTERIM TRANSPORT AND OFFSITE TREATMENT AND DISPOSAL

1. Prior to operation of the onsite treatment plant, collected liquids shall be transported to an appropriate, EPA approved, offsite treatment facility. This shall be accomplished by:
   - Providing adequate, temporary, onsite storage.
   - Providing appropriate trucks to transport the liquid in the manner which minimizes the potential for spills
   - Contracting with an approved TSD facility.

1.4.3 PRETREATMENT AND TRANSPORT PIPING

1. Liquids shall be prepared, combined, and transported from the point of origin to the treatment plant storage in the manner which minimizes the overall treatment requirements. This shall be accomplished by:
   - Avoiding the mixture of streams which can impair treatment.
   - The initial removal of constituents by pretreatment, if appropriate for maintaining treatment plant efficiency.
   - Minimizing the potential for uncontrolled transport of liquids to the Leachate Treatment System (LTS) which could upset the system.

1.4.4 INFLUENT STORAGE AND LIQUID TREATMENT

1. Combine and equalize flows and operate the treatment plant so that the amount of liquids from the site are adequately treated, at the lowest cost.

1.4.5 EFFLUENT STORAGE AND TRANSPORT

1. Provide sufficient storage to permit appropriate analyses to be performed prior to discharge to the Publicly Owned Treatment Works (POTW) and/or irrigation system.

1.4.6 OTHER LMS WASTES

1. Other LMS wastes generated will be managed pursuant to Section IX (Work to be Performed) of the Decree.

1.4.7 MAINTENANCE AND MONITORING

1. Site features, including appurtenances, systems, support facilities, and related necessary offsite systems, facilities, or equipment shall be maintained to the extent required to fulfill the control objectives specified in Subchapters 1.4.1 through 1.4.5.

2. Monitoring of site features, including appurtenances, systems, support facilities, and related necessary off-site systems, facilities, or equipment shall be conducted as required to fulfill the control objectives specified in Subchapters 1.4.1 through 1.4.5. Also, monitoring of meteorological and geotechnical instruments will be conducted, as necessary, to assist in decisions regarding maintenance actions and the design of improvements and to increase overall knowledge of site conditions. Additional monitoring procedures or equipment may become necessary during the course of the LMS activities. Activities may include monitoring of control parameters or system parameters, and inspections of site conditions.

1.4.8 IMPROVEMENTS

1. LMS improvements shall be evaluated and accomplished pursuant to Subchapter 1.3.5 (SCM Improvements).

1.5 HEALTH AND SAFETY OBJECTIVES

1. All site activities shall be developed, planned, and implemented in a manner which is consistent with applicable occupational and public health and safety requirements, as specified in Section XI (Worker Health and Safety Plan) of the Decree, and Chapter 4.0.

1.6 QUALITY OBJECTIVES

1. All site activities shall be developed, planned, and implemented in a manner which provides data of adequate and appropriate quality concerning system operation or site characteristics, as specified in Section XII (Quality Assurance/Quality Control) of the Decree, and Chapter 4.0.

1.7 MANAGEMENT INFORMATION SYSTEM (MIS)

1. In the development and selection of the MIS and associated software, preference shall be given to systems which can be readily transferred to EPA.

2.0 BACKGROUND

2.1 SITE HISTORY

2.1.1 LOCATION

1. The Oil Site is located at 900 Potrero Grande Drive in the City of Monterey Park, Los Angeles County, California. The Site encompasses approximately 190 acres, with the Pomona Freeway dividing the Site into a 45 acre northern parcel and a 145 acre southern parcel. The majority of the onsite systems and facilities are located on the southern parcel.

2.2 SYSTEM DESCRIPTION

1. The description of existing site systems is provided in Exhibit I of this Scope of Work. The following systems and facilities are discussed:

- 1.1 Active Control Systems
  - 1.1.1 Gas Management
    - 1.1.1.1 Interior Gas Extraction System
    - 1.1.1.2 Perimeter Gas Extraction System
    - 1.1.1.3 Air Dike System
- 1.2 Leachate Collection Systems
  - 1.2.1 Area I Collection
  - 1.2.2 Area II Collection
  - 1.2.3 Area III Collection
  - 1.2.4 Area IV Collection
  - 1.2.5 Area V Collection
  - 1.2.6 Onsite Storage
- 1.3 Landscaping/Irrigation
  - 1.3.1 Oil System
  - 1.3.2 Toe Buttress and Northwest Slope System
- 1.4 Passive Control Systems
  - 1.4.1 Stormwater/Erosion Control
  - 1.4.2 Site Access and Security
    - 1.4.2.1 Access Roads
    - 1.4.2.2 Perimeter Fencing
    - 1.4.2.3 Gate Security Office
    - 1.4.2.4 Security Lighting
    - 1.4.2.5 Utilities and Support Facilities
    - 1.4.2.6 Entrance Gate

1.5 Monitoring

1.5.1 Probes
1.5.2 Wells
1.5.3 Water Meter Boxes
1.5.4 Meteorological Station
1.5.5 Geotechnical Instrumentation

3.0 INTEGRATION AND COMMUNICATION PROCEDURES

3.1 INTRODUCTION

1. This chapter describes how certain Work Defendant and EPA activities at the site shall be coordinated. These activities include:

   - Leachate management and treatment plant design.
   - Site control and monitoring.
   - Landfill gas control, including the gas control operable unit.
   - Remedial investigations.
   - Feasibility studies.
   - Emergency response activities.

2. Communication between the organizations performing or approving the above activities is critical to integration of the various activities discussed below. The following subchapters describe the activities, the organizations, and the structure for communication.

3.2 SITE ACTIVITIES REQUIRING INTEGRATION

1. Examples of activities potentially requiring integration include:

   - SCM activities which could modify the liquid quantities or qualities (e.g., equipment washdown water, modifications to piping system), or storage which will have a direct and immediate impact on the LMS. Conversely, quality or quantity limitations of the LMS may place constraints on site activities.
   - Hydrogeologic drilling and testing activities can generate waters which may require treatment. Temporary storage may be required to determine if treatment of those liquids is required, and if so, procedures for blending the fluids into the treatment system flow will have to be determined by the plant operation. Periods of blending may require the temporary reduction of leachate collection or hydrogeologic testing activities.
   - Relevant data and experience gained from the SCM and LMS operation must be integrated into the final feasibility study for the site.
   - Activities associated with landfill gas control activities will continue to generate condensate which should be incorporated into the LMS influent stream. Therefore, any significant changes in the gas collection program must be coordinated with the design and operation of the LMS and appropriate SCM activities.
   - To the maximum extent feasible, existing flare stations may be used to incinerate LMS off-gas.
   - The use of treatment plant effluent for the irrigation system.
   - Irrigation activities currently conducted by Operating Industries, Inc.

3 3 COMMUNICATION AND COORDINATION PROCEDURES

1 As described in the Decree, the Work Defendants, EPA, and DHS shall each designate a Project Coordinator as the focal point for formal communications. In addition, the following communications procedures shall be used to assure integration of site activities:

- Periodic technical exchange meetings
- Mutual review process for proposed activity changes.
- Notification procedures for any onsite activities or events, including spills or upsets, which may affect the Work

2 Periodic technical exchange meetings shall be conducted between Work Defendants and EPA (and others, as appropriate,) working at the site. Discussion topics may include their current activities and forthcoming plans regarding activities that could have impacts on other entities performing work at the site.

3. To assist in the approval of project deliverables and to assure integration of site activities, the periodic technical exchange meetings shall be a forum allowing the participants to present status reports and interim conclusions and to receive comments, thus building a technical consensus early on. This may include exchange of data and reports.

4. The periodic technical exchange meeting participants shall agree on notification procedures for upsets or short term instances which may have an effect on each other's activities. As appropriate, these procedures shall be integrated with overall site emergency procedures.

5. Sometimes it shall be necessary to include other organizations, including state or local agencies, at a technical exchange meeting. Invitations to attend shall be coordinated through the Project Coordinators.

6. Pursuant to the applicable health and safety plans, tours of the site by interested agency, industrial, or public groups shall be arranged through the Project Coordinators.

4.0 SCOPE OF WORK FOR PRETRANSITION AND TRANSITION ACTIVITIES

1. This chapter presents the Scope of Work for the following activities which are common to both the SCM and LMS programs.

- Task T.1 - Transition Plan.
- Task T.2 - Interim Budget and Operations Plan.
- Task T.3 - Safety, Health and Emergency Response Plan.
- Task T.4 - Quality Assurance/Quality Control (QA/QC) Plan.
- Task T.5 - Transition Activities.
- Task T.6 - Project Proposal Plan
- Task T.7 - SCM/LMS Master Plan.
- Task T.8 - Operations Manual.

2. The Transition Plan must be approved before the transition period begins. Tasks T.2 to T.4 must be completed before the Work Defendants assume field responsibilities. Tasks T.6 to T.8 shall be completed according to the schedule set forth in Chapter 9.0.

3. The preliminary and detailed budget estimates shall be developed on the basis of standard engineering cost estimating practices. For the purposes of this Scope of Work, the preliminary and detailed budget estimates shall have goals of ± 25 and ±15 percent, respectively, of actual costs.

4. Task T.1 - Transition Plan - This plan shall specify the procedures and required activities for the Work Defendants to begin formal field transition activities with EPA. The plan shall include at least the following elements:

- Onsite Facilities Plan, including locations, utility hook-ups and procedures for integrating with existing facilities.
- Personnel and facilities mobilization logistics and schedule.
- Training of the Work Defendants' contractor by the EPA contractor as needed for the transition.
- Staffing approach and breakdown by discipline and organizational responsibility matrix.
- Reduced personnel plan for a period exceeding 8 weeks, if appropriate.

During the transition period, the EPA's Contractor shall maintain responsibility for field activities. Work Defendants shall comply with applicable existing health and safety plans.

5. Task T.2 - Interim Budget and Operations Plan - This plan shall be used for both SCM and LMS activities until the SCM/LMS Master Plan and Operations Manual are approved. The plan shall include at least the following elements.

   - A statement of the control, maintenance and monitoring activities to be undertaken at the site, including schedules for each.
   - Specific reference to portions of the EPA Operations Manual (existing at that time) which will be used.
   - An interim Monthly Progress Report format.
   - Subcontractor Transition Plan, including procedures for offsite hauling and treating of leachate.
   - Management Information Systems (MIS) description and demonstration schedule.
   - An implementation procedure for beginning the MIS program.
   - A budget for a 6 month period, including a reasonable contingency for unknown maintenance or repair activities.
   - An Incident Report format.
   - Communication procedures for routine and emergency issues which arise after the transition period.

6. Task T.3 - Safety, Health and Emergency Response Plan - This plan shall guide health, safety and emergency response procedures for all activities to be conducted by the Work Defendants. As required to suit specific activities, addenda to the general plan shall be provided. The plan shall be developed pursuant to Section XI (Worker Health and Safety Plan) of the Decree. The general plan shall include at least the following basic elements:

   - Introduction and Purpose.
   - Applicable Laws and Regulations.
   - Onsite Organization and Coordination.
   - Medical Surveillance Program.
   - Chemicals of Concern.
   - Activities Hazard Analysis.
   - Site Control, Work Zones, and Security Measures.
   - General Safe Work Practices.
   - Training.
   - Personnel Protective Equipment.
   - Onsite Work Plans.
   - Standard Operating Safety Procedures.
   - Communication Procedures.
   - Monitoring Plan (Personnel and Environment).
   - Decontamination Procedures.
   - Community Safety.
   - Emergency Response Plan, including:
     - A Contingency Plan.
     - Identification and responsibilities of an Emergency Coordinator.
     - Procedures for updating and distributing the Plan.
   - Record Keeping.
   - Requirements for Subcontractor and Special Activity Plans.

EPA's comments on and approval of this Plan shall not constitute EPA approval of the Health and Safety Protocols and other health and safety portions of this Plan.

7. Task T.4 - Quality Assurance/Quality Control (QA/QC) Plan - This plan will guide quality procedures for all activities to be conducted by the Work Defendants. Addenda to the general QA/QC Plan and specific sampling plans shall be prepared as required for specific activities, such as for the LMS activities and shall be developed pursuant to Section XII (Quality Assurance/Quality Control) of the Decree. The Plan shall include at least the following basic elements:

   - Project organization and qualifications of staff.
   - Sampling and sample custody procedures, including the sample site selection rationale.
   - Analytical methods/procedures.
   - Analytical/statistical/control procedures, including requirements for accuracy, sensitivity, precision, sample quantities, calibration procedures, preventative maintenance, internal quality control checks, representative samples and data comparability.
   - Data handling, analysis and reporting.
   - Special testing.
   - Alternative test procedures.
   - Data validation procedures.
   - Requirements for subcontractor and special activity plans.

8. Task T.5 - Transition Activities - The procedures and activities during the transition period shall occur in accordance with the Transition Plan.

9. Task T.6 - Project Proposal Plan - This plan shall be prepared to determine, as early as possible, the schedule for preparing Project Proposals for improvements which may be implemented. Certain of the proposals shall be required as input to the SCM/LMS Master Plan. To facilitate scheduling and budgeting in the Master Plan, the potential improvements shall be subdivided into the following three categories:

   - Category I - Improvements which have the potential to significantly affect decisions regarding first year activities, and therefore which should be decided upon before the SCM/LMS Master Plan is finalized.
   - Category II - Improvements which could have importance to the configuration of a Category I item. The Project Proposal for Category II items should be completed prior to finalization of the Master Plan so that

alternative configurations are identified. Final decision regarding implementation of Category II items is not required prior to finalization of the Master Plan.

- Category III - Improvements which can be identified as being potentially important, but which do not appear to have significant impact on the first years SCM/LMS activities.

The Project Proposal Plan shall include at least the following elements:

- Identification of and description of potential improvements being considered, and an initial list of alternatives being considered for each.
- An evaluation of the importance of each potential improvement for the first year's SCM/LMS activities and to each of the other potential improvements.
- Conceptual schedules and budgets (±40%) for completing the range of alternatives under consideration for each potential improvement.
- Assignment of each potential improvement to Category I, II and III status.
- A detailed schedule and cost estimate for completing Project Proposals for each Category I and II item, and preliminary schedules and cost estimates for completing each Category III item.

10. Task T.7 - SCM/LMS Master Plan - This Master Plan shall be the main document for controlling and guiding SCM and LMS activities for implementation of this Decree by the Work Defendants. It shall state the basic SCM and LMS activities which must be accomplished and shall include a procedure to prioritize proposed improvements. The Master Plan shall be detailed for the upcoming year's activities and preliminary for later years. Subchapter 8.2 discusses procedures to formally revise the Master Plan annually so that each year's detailed planning reflects the most current site conditions. The Master Plan shall include at least the following elements:

- A statement of the intent and objectives of the SCM and LMS activities.
- Detailed schedule and description of necessary and potential SCM and LMS activities for the upcoming year period.
- Preliminary schedule for the remaining years of control, maintenance, monitoring and improvement activities.
- General descriptions and priority designations for potential improvements in the preliminary schedule and discussion of their possible budget implications.
- Preliminary budget and cash flow projections for all items on the preliminary schedule.
- Detailed budget for necessary and potential upcoming year activities. The budget shall include detailed summaries of labor, equipment, material and subcontractor requirements for each activity, an estimate of their anticipated costs, and an estimate of contingencies for unanticipated conditions.
- The schedule for completing all or portions of potential improvement designs during the upcoming year, in order to provide engineering estimates and schedules needed for establishing priorities.

11. Task T.8 - Operations Manual - The Operations Manual shall be prepared in coordination with the Master Plan to assure compatibility between the plans and day-to-day field activities. However, the Operations Manual shall be a complete, "stand alone" document to provide controls and guidance for the various site activities. The Operations Manual shall include the following items:

- Description of SCM related systems.
- Operational procedures.
- Operational emergency response.
- Maintenance procedures.
- Maintenance schedules.
- Monitoring procedures.
- Monitoring schedules.
- Strategies for special activities (such as erosion control on steep slopes).
- Program interaction/integration requirements.
- Parts and equipment inventory.
- Appendices with:
  - Approval procedures for budgetary variance and improvement prioritization.
  - Sampling Plans for each of the monitoring activities.
  - Incident report format.
  - Improvement and change order prioritization and approval procedures.
  - Subcontractor and vendor control procedures.
  - MIS User's Manual.
  - Monthly report format (see Subchapter 8.3.1).

During LTS design (Subchapter 6.4.2), an Operations and Startup Section specifically for that facility shall be developed. The Section shall be prepared to fit directly into the SCM/LMS Operations Manual.

12. The Appendix to the Operations Manual which describes the approval procedure for budgetary modifications shall consist of a management plan, which shall include at least the following elements:

- Definition of Work Breakdown Structure with tiered levels of responsibility, and work element budgets and milestones.
- Definition of the level of budgetary authority. The authority of approval on budgetary increases which shall be established in this Appendix, shall

reflect the degree of management required. For example, the Work Defendants' Project Coordinator could approve variances within his/her level of authority without seeking an approval from a higher level

- Definition of the procedure to report and request approval for potential variances beyond the approved level of authority.
- Budget variance approval request procedures which at the minimum shall include:
  - Nature and extent of the potential variance.
  - Potential impacts on overall goals of the Scope of Work.
  - Alternatives for mitigation of the variance.
  - Recommended action, including requested approval of variance, if appropriate.
- Specifications of the magnitude of variances to be reported in the monthly report and a definition of the reporting format.

13. Each Sampling Plan appendix shall include at least the following items:

- Sampling rationale and description of techniques used in selecting sampling sites (e.g., random, stratified).
- Specific sampling, preservation, and preparation procedures used, extraction methods, analytical references or descriptions (including sample size, types of sample containers, applicable samplers, etc.). For nonstandard or modified sampling methods, detailed procedures with appropriate references are required.
- Sampling program organization, if needed.
- Description of sample container and sampler cleaning procedures for each type of container to be used following EPA guidelines or other appropriate procedures.
- Procedures to avoid sample contamination.
- Sample preservation methods and holding times, following EPA SW-846 guidelines or other appropriate references.
- Sample transportation requirements (following EPA and Department of Transportation guidelines, as applicable).
- Chain-of-Custody procedures, following EPA SW-846 guidelines or other appropriate references.
- Procedures and responsibility for data validation, as appropriate.

5.0 SCM SCOPE OF WORK

5.1 INTRODUCTION

1. The Site Control and Monitoring (SCM) Program consists of the following tasks

- Task S.1 - Gas Management.
- Task S.2 - Stormwater/Erosion Control.
- Task S.3 - Landscaping/Irrigation.
- Task S.4 - Access Roads.
- Task S.5 - Fencing.
- Task S.6 - General Facilities and Utilities.

Discussions in this section for each of these activities include the following items, as appropriate

- Components.
- Operational Objectives.
- Maintenance Objectives.
- Monitoring Objectives.
- Improvement Objectives.

2. Specific monitoring activities are not discussed separately for each task because they will change over time. The monitoring requirements shall be detailed in the Operations Manual (Chapter 4.0). In order to illustrate the level of monitoring required, however, Table 5.1 provides an approximate summary of the monitoring activities currently being implemented. Also, the following list illustrates the approximate types and numbers of components currently being monitored:

- Observations of general field conditions.
- Operating performance of site mechanical systems.
- Perimeter gas probes at 55 locations.
- Air dike probes at 34 locations.
- Offsite gas probes at 27 locations.
- Offsite meter boxes at about 100 locations.
- North Parcel gas probes at 15 locations.
- South Parcel landfill gas monitoring probes at 15 locations.
- North Parcel landfill gas monitoring probes at 13 locations.
- The meteorological station.
- Geotechnical instrumentation including piezometers, inclinometers and surface monuments.
- Improvements to the monitoring system.

3. Also, improvements are not discussed with each task, because they are considered to be potential activities. Instead, Table 5.2 illustrates the type and proposed schedule of improvements considered to be appropriate by the Work Defendants.

TABLE 5.1

PRELIMINARY LIST OF
SCM MONITORING ACTIVITIES[1]

ACTIVITY	ITEM	MONITORING	
		DATA	FREQUENCY
I Gas Control	A Interior Gas Extraction System		
	1 Interior Flare Station	Instrument Readings: Inlet Pressure, Discharge Pressure, Inlet Gas Temperature, Discharge Gas Temperature, Total Combustibles, Oxygen, Flow, Stack Temperature, Flame Arrestor Differential Pressure, Lube Oil Pressure Operational Checks: Liquid Levels, Flow, Air Compressor, Cooling Fan, Control Panel, Temperature, Propane Tank Pressure	Daily
	2 Well Field	Instrument Readings: Valve Position, Total Combustibles, Oxygen, Vacuum, Temperature, Flow Operational Checks: Valve Position, Shimoff, Subsidence, Cracking, Leaks, Odor, Subsurface Fires	Bi-weekly
	B Perimeter Gas Extraction System		
	1 Main Flare Station	Instrument Readings: Inlet Pressure, Discharge Pressure, Inlet Gas Temperature, Total Combustibles, Oxygen, Flow, Flame Arrestor Differential Pressure, Stack Temperature Operational Checks: Condensate Pump, Liquid Level, Control Panel, Propane Tank Level, Silencers, Leaks	Daily (when operating)
	2. Auxiliary Flare Station	Instrument Readings: Inlet Static Pressure, Discharge Pressure, Differential Pressure, Total Combustibles, Oxygen, Flame Arrestor Differential Pressure, Stack Temperature Operational Checks: Propane Tank Level, Leaks	Daily (when operating)
	3 Well Field	Instrument Readings: Valve Position, Total Combustibles, Oxygen, Vacuum, Differential Pressure, Temperature Operational Checks: Leaks, Observations, Odor, Subsurface Fires	Twice per month
	C. Perimeter Air Dike System		
	1 Compressor Station	Instrument Readings: Oil Levels, Filter, Oil Flow, Water Temperature, Air Temperature, Discharge Pressure Operational Checks: Oil Leaks, Sight Glasses, Drains	Daily
	2 Well Field/Probes	Instrument Readings: Valve Position, Dynamic/Differential/Static Pressures, Flow, Total Combustibles Operational Checks: Subsidence, Breaks, Valve Damage	Once per week twice per week
	D Offsite Probes	Total Combustibles, Water Meter Boxes, Pressure	Daily
II Storm Water/ Erosion Control	Stormwater System	Operational Checks: Blockage, Subsidence, Ponding, Obstruction, Drains, Ditches, Breakage	Weekly (or as needed)
III Landscaping/ Irrigation	1 Oil System	Operational Checks: Pump Oil Levels, Pipes, Sprinklers	Weekly
	2. Tee Bottoms System	Instrument Readings: None Operational Checks: Water Pumps, Pipes, Sprinklers	Weekly
IV Access Roads	1 Main Access 2. Loop Road 3. Benches	Operational Checks: Surface Erosion, Cracks, Subsidence	Weekly (or as needed)
V. Fencing	1. Perimeter Fence 2. Gates 3. Facility Fencing	Operational Checks: Fence and Gate Integrity	Weekly
VI General Facilities and Utilities	1 Office and Lab Trailers 2. Health and Safety Equipment 3 MIS System 4 Utilities	Instrument Readings: Utility Gauges, Personal Health Protection Equipment Gauges Operational Checks: Observation of General Condition, Inspection of Emergency Response Capabilities	Weekly
VII Miscellaneous	Geotechnical System	Instrument Readings: Piezometers, Inclinometers, Surface Monuments	Monthly
	Meteorological System	Wind velocity and direction, humidity, solar radiation, barometric pressure, rainfall	Weekly

[1] This table includes an approximate summary of the monitoring activities currently being implemented

TABLE 5.2

SUMMARY OF POTENTIAL SCM IMPROVEMENTS

ACTIVITY	POTENTIAL IMPROVEMENTS	
	ITEM	YEAR
I. Gas Control	• Replace or Convert Air Dike System to Perimeter Migration Control and Monitoring System	1
	• Install Final Cover at Bottom of South and West Slopes	1-2
	• Expand and Improve Perimeter Migration Control and Monitoring System on South and West Boundaries	1
	• Deep and Shallow Slope Wells at Areas with Final Cover on South and West Slopes	2-3
	• Provide Condensate Collection System	1-3
	• Gas Header and Knockout System, as Required	1-3
	• Upgrade Existing Flares	1
II. Stormwater/Erosion Control	• Install New Temporary Down Drains for Deck and Benches	1
	• Install Deck Soil Berms to direct Flow to New, Temporary Down Drains and Modify Existing Down Drain Systems (as is practicable)	1
	• Install Temporary Inlets at Existing Benches into New Down Drain System	1
	• Finalize Ditches for Final Soil Cover Areas	3
III. Landscaping/Irrigation	• Seed and Mulch Areas Requiring Vegetation	1
	• Seed and Mulch Areas with Final Cover	3
	• Install Irrigation System on Final Cover Areas	3
IV. Access Roads	• A/C Pavement for Main Access Road	1
	• Macadam for Loop Road on West Portion	3
	• Improve Slopes and Provide Gravel for Bench Roads	1-3
V. Fencing	• Covered Under Control and Maintenance, as present	
VI. General Facilities and Utilities	• Temporary Offices, Laboratory and Change Facility	1
	• Management Information System	1
	• Telephone/Communication System	1
	• Health and Safety, and Monitoring Equipment	1

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2. Operational Objectives.

- Maintain existing and improved onsite vegetation in a condition which effectively controls erosion, especially on the steeper slopes. New vegetation selection should consider irrigation requirements, root depth, fire potential and other factors which could affect performance and maintenance requirements.
- Avoid over irrigation which could result in unnecessary infiltration into the landfill.

3. Maintenance: Provide labor, equipment, materials, technical expertise, and supervision necessary to achieve the operational objectives.

4. Monitoring: Table 5.1 indicates preliminary SCM monitoring activities related to landscaping/ irrigation. Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan and the Operations Manual.

5. Improvements: Table 5.2 indicates potential improvements to include seeding and mulching of existing areas requiring vegetation and areas of new cover. Subchapter 8.2 discusses the procedure to evaluate each potential improvement and to obtain approval from EPA.

5.5 TASK S.4 - ACCESS ROADS

1. Components Include:
   - The main access road from the entrance on the North Parcel to the auxillary flare station.
   - The loop road from the end of the access road, across the landfill deck and around the west toe of the landfill, back to the access road.
   - Bench roadways which provide access around the South Parcel landfill, at several levels.

2. Operational Objectives:
   - Provide access to critical areas on the site under all weather conditions.
   - Maintain other access roads, as appropriate.
   - Minimize the amount of mud carried into activity areas and offsite by vehicles during rainy period.
   - Avoid hazards in areas requiring vehicle travel.

3. Maintenance: Provide labor, equipment, materials, technical expertise, and supervision necessary to achieve the operational objectives.

5.2 TASK S.1 - GAS MANAGEMENT

1. Components Include:
   - Interior gas extraction system wells, surface collectors, conveyance components and flare station.
   - Perimeter gas extraction system wells, conveyance components, main flare station, and auxiliary flare station.
   - Perimeter air dike system, compressor station, wells, conveyance components and probes.
   - Landfill cover as it relates to emissions.
   - Gas-related improvements.

2. Operational Objectives:
   - Minimize surface emissions and subsurface gas migrations to the extent practicable with those systems which are in place or improved.
   - Mitigate emissions from surface cracks, where practicable, by applying cover material, by monitoring, or by other approved means, to assure emission levels do not increase exposure risks in public or worker exposure areas.
   - Operate each flare station above 1400°F or as otherwise approved.
   - Mitigate subsurface fires to the extent possible.

3. Maintenance: Provide labor, equipment, materials, technical expertise and supervision necessary to achieve the operational objectives and requirements, considering the components available and the budgeted scope of activities for each year.

4. Monitoring: Table 5.1 indicates preliminary SCM monitoring activities related to specific gas control components. Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan and the Operations Manual.

5. Improvements: Table 5.2 summarizes improvements which potentially should improve the Gas Management System, especially in the areas of greatest potential for public exposure. Subchapter 8.2 discusses the procedure which shall be used to evaluate each potential improvement and to obtain approval from EPA.

5.3 TASK S.2 - STORMWATER/EROSION CONTROL

1. Components Include:
   - Down drains and inlet structures.
   - Bench gutters and inlets.
   - Road gutters.
   - Toe of landfill channels to storm drains or flood control drains.
   - Landfill cover as it is affected by erosion.
   - Drainage and erosion control improvements.

2. Operational Objectives:
   - Mitigate subsidence, cracking or ponding to the extent practicable.
   - Mitigate areas of significant erosion as soon as possible after discovery.
   - Take steps to minimize erosion from storm events, whenever possible (e.g., improve and maintain site grading).
   - Maintain the integrity of onsite facilities and systems as a result of erosion and runoff effects.
   - Maintain site grading.

3. Maintenance: To provide labor, equipment, materials and supervision necessary to achieve the operational objectives, to the extent practical with the existing site conditions.

4. Monitoring: Table 5.1 indicates preliminary SCM monitoring activities related to stormwater/erosion control. Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan and the Operations Manual.

5. Improvements: Table 5.2 summarizes improvements proposed by the Work Defendants which are intended to: (1) improve stormwater management, (2) decrease the potential for erosion and ponding from all types of storms, and (3) decrease the potential for major erosion failures. Subchapter 8.2 discusses the procedure which shall be used to evaluate each potential improvement and to obtain approval from EPA.

5.4 TASK S.3 - LANDSCAPING/IRRIGATION

1. Components Include:
   - The irrigation water pump.
   - The toe buttress system.
   - The NW slope system.
   - The OII irrigation system, presently being operated by Operating Industries, Inc. personnel.
   - Landscaping/irrigation related improvements.

2. Operational Objectives:
   - Maintain existing and improved onsite vegetation in a condition which effectively controls erosion, especially on the steeper slopes. New vegetation selection should consider irrigation requirements, root depth, fire potential and other factors which could affect performance and maintenance requirements.
   - Avoid over irrigation which could result in unnecessary infiltration into the landfill.

3. Maintenance: Provide labor, equipment, materials, technical expertise, and supervision necessary to achieve the operational objectives.

4. Monitoring: Table 5.1 indicates preliminary SCM monitoring activities related to landscaping/irrigation. Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan and the Operations Manual.

5. Improvements: Table 5.2 indicates potential improvements to include seeding and mulching of existing areas requiring vegetation and areas of new cover. Subchapter 8.2 discusses the procedure to evaluate each potential improvement and to obtain approval from EPA.

5.5 TASK S.4 - ACCESS ROADS

1. Components Include:
   - The main access road from the entrance on the North Parcel to the auxillary flare station.
   - The loop road from the end of the access road, across the landfill deck and around the west toe of the landfill, back to the access road.
   - Bench roadways which provide access around the South Parcel landfill, at several levels.

2. Operational Objectives:
   - Provide access to critical areas on the site under all weather conditions.
   - Maintain other access roads, as appropriate.
   - Minimize the amount of mud carried into activity areas and offsite by vehicles during rainy period.
   - Avoid hazards in areas requiring vehicle travel.

3. Maintenance: Provide labor, equipment, materials, technical expertise, and supervision necessary to achieve the operational objectives.

4. Monitoring: Monitoring of the access roads (Table 5.1) currently consists of weekly visual observation of conditions to determine if repairs are required Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan in the Operations Manual

5. Improvements: Table 5.2 summarizes improvements proposed by the Work Defendants to satisfy the indicated operational objectives.

5.6 TASK S.5 - FENCING

1. Components Include:
   - The perimeter fence, including gates at several locations.
   - Interior fencing at the trailer compound, flare stations, and meteorological station.
   - The entrance gate.
   - Fencing related improvements, if any.

2. Operational Objectives: Coordinate with EPA and its security contractor to discourage unauthorized entry.

3. Maintenance: Provide labor, equipment, materials, technical expertise, and supervision necessary to achieve the operational objectives.

4. Monitoring: Monitoring of the fences (Table 5.1) currently consists of weekly visual observation for damage which requires repair. Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan and the Operations Manual.

5. Improvements: No major fence improvements are planned at the present time (Table 5.2).

5.7 TASK S.6 - GENERAL FACILITIES AND UTILITIES

1. Components Include:
   - Office and laboratory trailers.
   - Utilities.
   - Health and safety and monitoring equipment.
   - Onsite communications system.
   - MIS system.
   - Decontamination facilities.

2. Operational Objectives:
   - Provide support for the staff and equipment required to accomplish the SCM activities on a routine basis.
   - Provide support to respond to unanticipated events and emergencies
   - Provide procedures for maintaining and reporting accurately the SCM activity and monitoring results.

3. Maintenance: Provide labor, equipment, materials, technical expertise, and supervision necessary to achieve the operational objectives.

4. Monitoring: Currently consists of weekly visual observations (Table 5.1) of general conditions and a monthly detailed check of emergency response capabilities. Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan in the Operations Manual.

6.0 LMS SCOPE OF WORK

6.1 INTRODUCTION

1. This chapter presents the Scope of Work for the Leachate Management System (LMS) in the following sections:

   - Task L.1 - Leachate Control, Maintenance, Monitoring and Improvements
   - Task L.2 - Offsite Transport and Treatment
   - Task L.3 - Leachate Treatment System (LTS) Design, Construction, Startup and Operation
     - Task L.3a - Predesign Activities
     - Task L.3b - Plant and Facilities Design Activities
     - Task L.3c - Procurement and Construction
     - Task L.3d - Startup
     - Task L.3e - Operations
     - Task L.3f - Final Construction Report

2. The overall LMS areas of responsibility include:

   - Management, maintenance, monitoring and improvements to the leachate extraction and conveyance systems.
   - Management, maintenance, monitoring and improvements for storage facilities associated with gas condensate, decontamination washdown and waters produced by RI/FS activities.
   - Offsite transport and treatment of liquids which cannot be treated onsite.
   - Design, construction, maintenance, monitoring and improvements to collection transport and storage systems for liquids to be treated.
   - Design, construction, startup, operation, maintenance, monitoring and improvements to the onsite LTS for treating and effluent disposal of onsite generated liquids.

6.2 TASK L.1 - LEACHATE CONTROL, MAINTENANCE, MONITORING AND IMPROVEMENTS

1. Components Include:
   - Area I collection system, including shallow french drains to control seepage, 36-inch diameter reinjector wells and one deep monitoring well.
   - Area II collection system, including extraction wells, conveyance system to Area III and several inactive reinjection wells.

   - Area III collection system consisting of a shallow french drain system, buried steel tanks, a gravel collection zone, an off-landfill french drain and leachate collection sump system, and pumping and conveyance system to the above ground tanks in Area IV.
   - Area IV collection system which includes shallow gravel trenches, an unlined sump, and a pumping and conveyance system to above ground storage tanks, also located in this area.
   - Area V collection system which consists of shallow gravel trenches, and leachate disposal borings.
   - The toe buttress collection tanks.
   - The onsite storage in Area IV, which consists of leased portable above ground storage tanks in protected berms.
   - The condensate collection tank at the interior gas system flare station.
   - The storage tank for potentially contaminated water at the vehicle decontamination facility.

2. Operational Objectives:
   - Transfer collected leachate and liquids to above ground storage tanks, pretreatment facilities or conveyance systems as necessary.
   - Provide onsite storage suitable for the volume of liquids being handled until a new treatment plant system becomes available.
   - Mitigate surface seeps offsite immediately upon discovery.
   - Mitigate potential offsite subsurface seepage if possible with systems which are in place at the time.

3. Maintenance: Provide labor, equipment, materials, technical expertise and supervision necessary to achieve the operational objectives.

4. Monitoring: The following are approximate monitoring activities for the LMS program.
   - Volume of leachate and liquids generated by collection area, if possible.
   - Characteristics of liquids collected by area semi-annually.
   - Depth of liquid in extraction wells on a quarterly basis.
   - Evidence of leachate seeps as determined from routine observations of surface conditions.

   Actual monitoring requirements shall be set forth in the Interim Budget and Operations Plan and the Operations Manual.

5 Improvements: Currently, potential improvements are being accomplished in Areas III and IV to reduce or eliminate reliance on unlined sumps and underground storage tanks. Because they could significantly improve leachate control, the following additional potential improvements will be considered:

- Installation of pumps into any new perimeter gas migration control wells with liquid.
- Installation of pumps into existing wells/borings and new deep slope wells.
- Installation of conveyance, pretreatment and storage facilities for newly installed pump systems.
- Expansion of existing french drains, where appropriate.

Subchapters 1.3.5 and 8.2 discusses the procedure which shall be used to evaluate each potential improvement and to obtain approval from EPA.

6.3 TASK L.2 - OFFSITE TRANSPORT AND TREATMENT

1. Components Includes:
   - Transfer of liquid from onsite storage tanks to an offsite, RCRA permitted TSD facility for:
     - All collected liquids prior to treatment plant construction.
     - Any collected liquids which cannot be adequately treated by the onsite treatment plant.
   - Appropriate tank trucks for the types and volumes of liquids to be transported.

   The RCRA-permitted TSD facility shall be approved in accordance with Subsection 121(d)(3) of CERCLA, as amended, and EPA's Revised Procedures for Implementing Off-site Response Actions (Off-site Policy) dated November 13, 1987 (EPA OSWER Directive 9834.11).

2. Operational Objectives: Provide all services, equipment, vehicles and material required to safely transport and dispose of collected liquids from the site.

3. Monitoring: Examples of monitoring of offsite transportation include:
   - Maintenance of inventories of pumped volumes from each collection point.
   - Onsite maintenance of the related manifests.

4. Improvements: No major improvements for this activity are planned at the present time.

6.4 TASK L.3 - LTS DESIGN, CONSTRUCTION, STARTUP AND OPERATION

1. The LTS design, construction, startup and operations shall be conducted in a manner which is consistent with the Leachate Management ROD.

6.4.1 TASK L.3a - PREDESIGN ACTIVITIES

1. The LTS predesign activities shall result in a Predesign Report to provide information, including the following:
   - Selected pretreatment, storage, equalization and main treatment processes
   - Selected site configuration.
   - Selected pipeline routes.
   - Final design workplan.
   - Effluent and residuals handling requirements.

2. The predesign activities include the following major tasks, which are described in the following sections:
   - Task L.3a.1: Identification of the range of liquid quantities and qualities which must be handled by the treatment facilities. These data are essential to determine: (1) influent storage and equalization requirements, (2) special pretreatment requirements for some or all liquid streams, (3) the most appropriate treatment system, including component sizes, (4) the range of conditions which must be handled without causing system upsets, and (5) liquid collection systems management to avoid conditions outside of the LTS facilities' capacity.
   - Task L.3a.2: Identification of performance requirements for the liquid effluent, LMS related air emissions, and sludge residues from the treatment process.
   - Task L.3a.3: Initial screening of processes to determine the types and range of bench/pilot tests to be conducted.
   - Task L.3a.4: Preparation of a Bench/Pilot Testing plan.
   - Task L.3a.5: Conduction of the Bench/Pilot treatability studies.
   - Task L.3a.6: Selection of the most appropriate process type, capacity and configuration to suit the anticipated quality and quantity of leachate, performance requirements, and physical site conditions.
   - Task L.3a.7: Preparation of the Predesign Report, which shall form the basis for proceeding with the actual LTS design.

6.4.1.1 Task L.3a.1 - Quality and Quantity Characterizations

Liquid Quality for Treatability

1. Quality characterization of the liquid to be treated shall include

   - The range of expected concentrations of constituents for estimated normal flow conditions.
   - The range of concentrations of constituents which may cause process upsets.
   - Special constituents of interest (e.g., a constituent which would meet each standard, but could have adverse effects on some vegetation if the effluent is used for irrigation).

2. These characteristics shall be determined by a combination of: (1) evaluation of the historical data base, (2) specific source analyses currently being gathered by the EPA, and (3) best estimates of the conditions that may result from other (e.g., SCM, RI/FS) activities. The evaluation of potential effects of different sources on equalization and/or segregation procedures shall include consideration of the extent to which each flow volume can be individually controlled for short and/or long term periods, if required to avoid an upset condition. For example, pumpage from one or several wells could be slowed or temporarily stopped if those wells were producing leachate requiring special handling.

3. Preliminary characterization of the quality of liquids which may be anticipated under full scale leachate removal activities shall also be incorporated. These estimates shall provide a basis for evaluating the potential incorporation of the LTS into the final remedy.

Liquid Quantity for Treatability

1. Liquid quantity estimates shall include consideration of:

   - Past and present trends.
   - Expected effects of related site activities, such as leachate extraction, gas condensate generation and washdown activities.
   - Hydrogeologic testing plans.
   - Efforts to reduce the potential for landfill liquids to enter ground water.
   - Other activities which may impact liquid volumes.

2. The estimates shall consider continuous flow sources and the potential for short term peaks to optimize the combination of storage, equalization, integration and processing. Also, relationships between quantity and quality extremes shall be correlated to determine limiting conditions.

Equalization - Options and Limitations

1. The required influent storage and equalization system capacities and flexibility shall be determined from the quality and quantity data. The evaluation shall include consideration of:

   - Instrumentation and controls.
   - Sizes and interconnections between tanks.
   - Options for oil and grease or VOC removal from individual influent streams or after mixing.
   - Temporary extra storage for liquids requiring special handling.
   - Control of emulsification potential.
   - Emergency containment requirements.
   - Location with respect to collection, transport and treatment systems.
   - Possibilities for special treatment for certain streams.

2. If predictions indicate the potential for quality or quantity upsets, even with a conservative equalization system, controls on other source streams may be necessary.

6.4.1.2 Task L.3a.2 - Performance Criteria Determination

1. In addition to the analyses conducted in the Leachate Management Feasibility Study and ROD, performance criteria may be determined based on at least the following factors:

   - Local, State and/or Federal standards determined to be ARARs for the type, location and configuration of the treatment facilities selected.
   - Cost/quality tradeoff evaluations, when appropriate, such as: (1) sludge quality and disposal costs, or (2) effluent quality and special POTW charges.
   - Special technical considerations such as effects of quality on vegetation for an irrigation option.

2. Performance criteria shall be established for liquid effluents, air emissions and sludges as discussed in the following sections.

Effluent Quality Criteria

1. Two liquid effluent options for onsite treatment are: (1) discharge into a POTW Los Angeles County Sanitation Department (LACSD) sewer pipeline, and (2) use of the effluent as onsite irrigation water after blending with other irrigation water streams.

2. The effluent may be discharged to the POTW, based on standard pretreatment and discharge limits consistent with ARARs.

3. If effluent is considered for irrigation, at least the following factors shall be evaluated:

   - Regulatory concentration limitations for water as applied to the ground surface.
   - Constituent limitations for existing or desirable types of vegetation.
   - Costs for effluent storage during extended rain periods.
   - Blending potential for present application rates and those which may be modified by other site activities, including final remedies.
   - Qualities and costs of waters for blending, such as fresh drinking water or recycled sanitary treatment plant effluent.

4. The following factors may also be considered in establishing the effluent quality:

   - The requirement (if any) and schedule for delisting of listed hazardous waste.
   - Predisposal analyses requirements, and the related potential effects on the system.

Air Emissions Criteria

1. To the extent practical and as required by applicable laws and regulations, the LTS shall be enclosed so that off-gases are contained. As determined during design, emissions of off-gases shall be controlled by: (1) direct discharge for permissible small sources, (2) use as combustion air at a flare station, (3) activated carbon treatment at the location of treatment or storage, or (4) other means.

2. Air quality performance criteria for new emission sources shall be determined using applicable standards, including integration with other site activities as appropriate.

Sludge Performance Criteria

1. Application of sludge performance criteria (e.g., chemistry, solids content), anticipated volumes and storage, and handling and disposal costs of different sludge types shall be incorporated in the cost-effectiveness evaluation.

2. Studies, as appropriate to determine waste management procedures, shall consider delisting and special analyses costs for sludge which may be determined to be hazardous.

Process Flexibility and Redundancy Strategies

1. An important step toward process and location selection (to be made consistent with the Leachate Management ROD) shall be the determination of the amount of flexibility and redundancy required to:

   - Optimize the combined collection, storage and treatment activities.
   - Provide continuous operation for a reasonable range of influent conditions.
   - Avoid excessive plant shutdown periods, which could adversely affect the collection operations.

2. An example of flexibility would be to provide a piping arrangement, controlled by valves, to allow the operations personnel to use different portions of the LTS for treating liquid streams with dissimilar chemical characteristics. An example of redundancy would be to provide two reactors in parallel, as opposed to a single larger tank, so that the entire system would not be shut down during a maintenance period.

6.4.1.3 Task L.3a.3 - Treatability Screening

1. Treatability screening shall be undertaken to identify the alternative treatment systems (e.g., physical/chemical, powdered activated carbon, air stripping) having the potential to satisfy the quality/quantity estimates, performance criteria and the flexibility strategy, in accordance with the Leachate Management ROD. Then, initial beaker scale laboratory tests on representative leachate samples shall be undertaken to eliminate the least desirable process arrangements and to select those appropriate for larger scale bench/pilot test treatability evaluation.

2. Treatability screening shall consider: (1) feasibility based on state of the art knowledge and initial beaker scale tests, (2) capital costs, (3) operating costs, (4) net present worth,

(5) flexibility, (6) compatibility with probable long-term solutions, (7) long and short-term effectiveness, (8) state and community acceptance, (9) consistency with the anticipated final remedy, and (10) applicable EPA Guidance.

6.4.1.4 Task L.3a.4 - Bench/Pilot Testing Plan

1. A plan to guide the program shall be prepared by the Work Defendants and approved by the EPA prior to beginning the formal bench/pilot testing activities. The plan shall include the following elements:

   - Introduction and Purpose.
   - The rationale for selecting liquid types to be tested.
   - The rationale for selecting the processes to be tested.
   - Sampling and analyses protocols.
   - Flow diagrams for the tests to be conducted.
   - The anticipated testing schedule, including factors which shall be used to determine when adequate testing is completed.
   - Task-specific addendum to the general plan:
     - Safety, Health and Emergency Response Plan.
     - Sampling, Analysis and Quality Management Plan.

6.4.1.5 Task L.3a.5 - Bench and Pilot Scale Treatability Studies

1. Appropriate treatment processes shall be selected for the bench/pilot testing program. If the flexibility strategy shows benefits for including optional flow paths for certain sources, the bench scale program would be expanded to test each configuration which may be selected.

2. Final treatability acceptance tests shall include the following range of influent characteristics:

   - The expected quality after equalization or segregation.
   - Maximum concentrations of the most difficult constituents which could be expected.
   - Potential upset conditions caused by unusual stream quality/quantity conditions.
   - The maximum rate of through-put flows anticipated.
   - Potential upset conditions caused by operator error or misoperations.

3. The treatability performance shall initially be evaluated against the performance requirements identified in Subchapter 6.4.1.2. Those processes which pass these requirements shall be included into the final selection process.

6.4.1.6 Task L.3a.6 - Final Process Selection

1. The final process, or combination of processes selected, shall be determined by an evaluation of at least the following factors, and in a manner consistent with the Leachate Management ROD:

   - Bench and pilot scale performance, including ability to meet performance criteria.
   - Anticipated reliability (avoidance of prolonged shutdowns) in spite of influent changes or misoperation.
   - Satisfaction of the flexibility strategy.
   - Capital and operating costs.
   - Operational procedures.
   - Compatibility with the potential final remedy.
   - Public health and safety.

2. Evaluation of each process configuration shall consider the potential for using only portions of the system to treat some of the inflowing liquids, if cost or operational efficiencies could be improved. Examples of this include: (1) that pumped ground water would only be subjected to air or steam stripping prior to discharge if VOCs are determined by EPA to be the only constituents of interest; or (2) only a portion of the flow may be subjected to oil and grease separation, if other inflowing liquids do not have significant quantities of these constituents.

3. The number, size, location and interconnection of individual equalization tanks shall be determined from: (1) the estimates of the influent quality and quantity, (2) the sensitivity of the plant to upsets, and (3) the range of operational conditions anticipated for other SCM activities, the gas control operable unit, and the RI/FS hydrogeologic program, which may generate liquids requiring treatment. The desirability or necessity to provide equalization or some pretreatment processes near the source shall be evaluated. If appropriate, the following may be considered in performing this evaluation:

   - If oil and grease are to be removed from only one or a few of the total sources, it could be desirable to remove those constituents before equalization occurs.
   - It could be essential to avoid conditions which can cause emulsions, such as pumping the liquid a long distance.
   - Air stripping and/or aeration of certain streams might produce off-gases most appropriately removed by incineration or flaring at the landfill gas flare station. These determinations will require close coordination with the EPA and other contractors.
   - pH control or special descaling procedures may be required for some streams to reduce the potential for corrosion or clogging of main liquid transport systems.

Capacity Selection

1. The treatment plant capacity shall be selected on the basis of such factors as:

   - Rates based on historical and planned activities.
   - The potential for large changes in quality as the result of other site activities.
   - The degree to which the LTS can serve as part of the final remedy
   - The initial working period (hours and days) and increased capacity possible from increasing the operational time.
   - The use of batch or continuous flow processes.
   - Cost to volume relationships for key equipment.
   - Difficulties in modifying a component because of grading or installation requirements.

2. Specific components may initially have different capacities depending on cost and operational efficiency and limitations on future modifications or improvements. For example, the influent and effluent storage may be built in stages to accommodate increasing flow rates.

System Configuration

1. At least the following shall be considered factors for determining the plant configuration:

   - The plant location.
   - Available suitable land area.
   - Foundation conditions.
   - Site boundaries and buffer zones.
   - The configuration of individual plant components.
   - Advantages of physically separating portions of pretreatment or equalization.
   - Potential requirements for expanding key components or the entire facility.
   - Spill containment capabilities.
   - Operation and maintenance controls.

2. Special design factors, such as required containment volume, seismic loadings and the potential for facility expansion, shall be included in the determination of the overall plant size and its configuration. For example, both a concrete pit containment and a diked containment system shall be evaluated.

3. Factors to be considered for determining the leachate influent transport system configuration shall include:

   - Anticipated collection points for leachate, landfill gas condensate, equipment washdown, and liquids from RI/FS activities.
   - The flexibility and redundancy strategies (see Subchapter 6.4.1.2)
   - Options ranging from complete piping systems, suitable for both interim and long term flows to vacuum truck transport for an appropriate period
   - The need to incorporate certain pretreatment or equalization elements nearer the collection point than the treatment plant.

6.4.1.7 Task L.3a.7 - Predesign Report Preparation

1. The results of the predesign tasks shall be used to prepare a Predesign Report. When approved by EPA, this report shall direct the LTS design task. The Predesign Report shall include at least the following basic elements:

   - Introduction and Purpose.
   - Results of the Predesign studies including:
     - Liquid quality and quantity estimates.
     - Influent storage and equalization requirements.
     - Special pretreatment requirements.
     - The anticipated range of conditions to be encountered.
     - Effluent and sludge performance criteria.
     - The redundancy and flexibility evaluations.
     - Results of the bench/pilot tests.
   - The evaluation used to recommend the final LTS system.
   - Description of the selected system.
   - Addendum to the General Sampling, Analysis and Quality Management Plan, if appropriate.
   - The LTS Design Basis Manual, as described in the next section.
   - The recommended design review steps and schedule.

2. The Design Basis Manual shall describe, as accurately and quantitatively as possible, the criteria which the design activities must satisfy. The manual shall include at least the following basic elements:

   - Introduction and Purpose.
   - Performance Requirements.
     - Effluent Performance Criteria.
     - Air Emission Criteria.
     - Sludge Performance Criteria.
     - ARAR Requirements.
     - Siting Requirements.

- Initial and Long Term Operational Procedures
  - Degree of Automation.
  - Personnel Requirements.
  - Operational Hours.
- Design Criteria.
  - Capacities of Major Components.
  - Flexibility and Redundancy Requirements.
  - Expansion Potential.
  - Containment Criteria.
  - Longevity Requirements.
  - Foundation Criteria.
  - Seismic and Drainage Criteria.
- Control and Monitoring Requirements
- Construction.
- Site Security.
- Schedule.
  - LMS Activities.
  - Integration Requirements.

6.4.2 TASK L.3b - PLANT AND FACILITIES DESIGN ACTIVITIES

1. The design phase shall consist of preparation of final plans and specifications for the complete LTS. The design shall be directed toward satisfying requirements specified in the Design Basis Manual. For convenience of review and construction, design packages shall be divided into three basic functions:
   - Pretreatment facilities.
   - The treatment plant.
   - Infrastructure facilities.
2. The design shall be submitted for review at the three (Intermediate - 50%, Prefinal-90% and Final) or four (Preliminary - 30%, Intermediate - 60%, Prefinal - 90% and Final) levels of completeness as approved by the EPA Project Coordinator based on review of the recommendation provided in the Final Design Report.
3. Design subtasks include:
   - Identification of all permits, approvals, and site access agreements required for the project, including a description of the data requirements and anticipated approved schedule for each.
   - Assurance that ARAR requirements are analyzed and incorporated, as appropriate, into the design. Controlling parameters as required by such standards shall be identified.

   - Value engineering screening in areas where a potential for cost savings exists. Value engineering screening shall be limited to project refinements which would not significantly change or alter the approved remedy, unless otherwise approved by EPA. Value engineering screening shall consist of listing high cost items that have a potential for cost savings. EPA may approve a formal value engineering study for those areas which exhibit reasonable potential for significant cost savings. Potential impacts on the remedial action project schedule and budget for a formal value engineering study shall be identified and provided to EPA upon request.
   - Inclusion in the technical specifications of contractor requirements for providing appropriate service visits by experienced personnel to supervise the installation, adjustment, startup and operation of the treatment systems, and appropriate operational procedures training once the startup has been successfully accomplished.
   - A Detailed Cost Estimate including a summary sheet, quantity take off sheets, and all work broken into labor, material, plant, supervision and administration and contingencies.
4. Each Design Package shall include at least the following items, completed to a level compatible with the design stage:
   - The procedures and schedule for obtaining permits, approvals or access agreements, as necessary. The permits, approvals, and access agreements, as necessary, should be obtained prior to the time of the Prefinal Design submittal.
   - The flow diagram and P&ID for collection piping and plant systems.
   - System general arrangement, showing locations of:
     - Collection Points.
     - Pipelines and Pumps.
     - Tanks.
     - Equalization and Pretreatment Systems.
     - Containment Systems.
     - Treatment Plant Outlines.
     - Access Roads and Parking Lots.
     - Office and Lab Structures.
     - Fence Lines and Gates.
   - Minimum dimensions to property lines.
   - Easement or right-of-way locations for offsite pipelines, if appropriate.
   - The POTW tap-in location, if appropriate.
   - The location of irrigation blending facilities, if appropriate.
   - The preliminary arrangement for controlling drainage at each system component.
   - Mechanical, electrical/instrumentation and civil/structural plans for the entire project.
   - Special conditions and construction specifications.
   - Engineering calculations used to determine component sizes, structural designs and the control of drainage.
   - The Startup and Operations Sections for inclusion to the SCM/LMS Operations Manual.
   - Addendum to the General Safety and Quality Plans, if appropriate.

5 The Startup and Operations Section to the SCM/LMS Operations Manual prepared as part of the design shall provide detail on the specifics and degree of operational activities required at the completion of the LTS and will provide a more accurate cost estimate of operational activities. Appropriate elements in the site-specific Startup and Operations Section include:

- Description of Startup procedures:
  - Prestartup equipment testing and system calibration.
  - Initial reagent handling.
  - Step-wise procedure for initiating flow into each component.
  - Initial flow constraints.
  - Systems checks to evaluate performance.
  - The desirable flow build-up schedule.
  - Operator training procedures.
- Integration requirements with other site activities which:
  - Can affect liquids requiring treatment.
  - Can be affected by the operation of the LTS.
- Description of Normal Operation and Maintenance:
  - Description of tasks for operation.
  - Description of tasks for maintenance.
  - Description of prescribed treatment or operating conditions.
  - Schedule showing frequency of each operational task.
- Description of Potential Operating Problems:
  - Description and analysis of potential operating problems.
  - Sources of information regarding problems.
  - Common remedies.
- Description of Routine Monitoring and Laboratory Testing:
  - Description of monitoring tasks.
  - Description of required laboratory tests and their interpretation.
  - Required QA/QC.
  - Schedule of monitoring frequency and when, if so provided, to discontinue.
- Description of Alternative Operations:
  - Alternative procedures to prevent undue hazard, should systems fail.
  - Analysis of vulnerability and additional resource requirements should a failure occur.
- Safety Plan:
  - Description of precautions, necessary equipment, etc., for site personnel.
  - Safety tasks required in event of systems failure (as an addendum to general site safety plan).

- Description of Equipment:
  - Necessary equipment for operations
  - Installation of monitoring components.
  - Maintenance of site equipment.
  - Replacement schedule for equipment and installed components.
- An Operations annual budget which should include but not be limited to the following:
  - Cost of personnel.
  - Costs of preventive and corrective maintenance.
  - Costs of equipment, supplies, etc.
  - Costs of any contractual obligation (e.g., lab expenses).
  - Costs of operations (e.g., energy costs).
- Records and Reporting Mechanisms Required:
  - Daily Operating Logs.
  - Laboratory Records.
  - Records for Operating Costs.
  - Mechanism for reporting emergencies.
  - Personnel and maintenance records.
  - Monthly/Annual Reports to State agencies.
- Appendices Describing:
  - Regulatory and Permit Requirements.
  - Manufacturer's Equipment Data.

The LTS Operations Manual shall be prepared as a separate insert for incorporation to the SCM/LMS Operations Manual as described in Chapter 4.0. General topics in the SCM/LMS Operations Manual not be duplicated.

6.4.3 TASK L.3c - PROCUREMENT AND CONSTRUCTION

1. Administration of the bidding process and contractor selection shall be in accordance with the procedures established by the Work Defendants. The EPA shall be provided with qualifications of selected contractors.

2. The Special Provisions Section of the specifications shall identify the contractor's responsibilities regarding onsite activities and special requirements such as quality control procedures or health and safety precautions.

3. The Special Provisions Section shall also include a completion schedule for plant startup and beginning of normal operations. If necessary, the schedule may be modified by agreement of EPA and the Work Defendants based on input received from the contractor.

4. The Work Defendants shall provide technical and management oversight for LTS construction. The oversight functions shall include at least the following items:

   - Procedures and schedules for the review of contractor submittal.
   - The format of weekly construction meetings.
   - Procedures for making engineering interpretations of the plans and specifications.
   - Procedures for interpreting the technical, schedule and cost impacts of proposed field changes and contract modifications.
   - Procedures for documenting field changes.
   - Procedures verifying and documenting compliance with quality control requirements.

6.4.4 TASK L.3d - STARTUP

1. The startup procedures in the LTS Startup and Operations Section of the SCM/LMS Operations Manual will be the guide for prestartup equipment testing. The revised Section following prestartup will be the guide for plant startup activities.

6.4.5 TASK L.3e - OPERATIONS

1. The operations portion of the revised LTS Startup and Operations Section of the SCM/LMS Operations Manual will be the guide for operating the LTS under both normal and abnormal conditions.

6.4.6 TASK L.3f - FINAL LTS CLOSEOUT REPORT

1. A Final LTS Closeout Report shall be prepared and submitted to EPA within 8 weeks from plant start-up. This report shall include at least the following items:

   - Introduction.
   - As-built plans and specifications.
   - Quality Control Records.
   - Explanation of significant changes which occurred compared to the design and the potential impact of those changes on performance.
   - Discussion of actual expenditures vs. budget projection.
   - Importance of the project experience to future project activities.
   - Suggestions for modifications, which should be made to future construction of similar or related items.
   - Revised LTS Startup and Operations Section of the SCM/LMS Operations Manual.

7.0 PRELIMINARY AND PROPOSED SCHEDULES AND PROPOSED BUDGET FOR WORK DEFENDANTS PROPOSED SCOPE OF WORK

7.1 INTRODUCTION

1. As discussed in Subchapter 1.2, the Work Defendants intend to undertake certain improvements which they believe shall accelerate completion of important environmental improvements for the site. This chapter provides the proposed schedule, budget and Potential Improvements Categories which the Work Defendants believe are appropriate for this work. However, the EPA cannot initially commit to approve specific improvements until: (1) appropriate justification studies have been completed, and (2) there is assurance that basic SCM and LMS activities during the initial five year period shall be adequately accomplished with remaining "Work" Escrow Account funds pursuant to Paragraph C of Section IX (Work to be Performed) and Section X (Escrow Account) of the Decree.

2. The Project Proposal Plan (Chapter 4.0, Item 9) will be used during the Pretransition and Transition Periods to further evaluate the need and schedule for preparing potential improvement proposals. The schedules discussed in this Subchapter will be modified as a result of the Project Proposal Plan.

3. The proposed schedule for the overall program is illustrated in the following two formats

   - Figures 7.1a and b, which present a detailed schedule for the first 2 years (104 weeks), beginning on the effective date of the Decree. The preliminary schedule for each activity shows the various stages of Work Defendant activities and EPA reviews according to procedures presented in Chapters 8.0 and 9.0.
   - Figure 7.2, which presents a summary of the entire 5-year period.

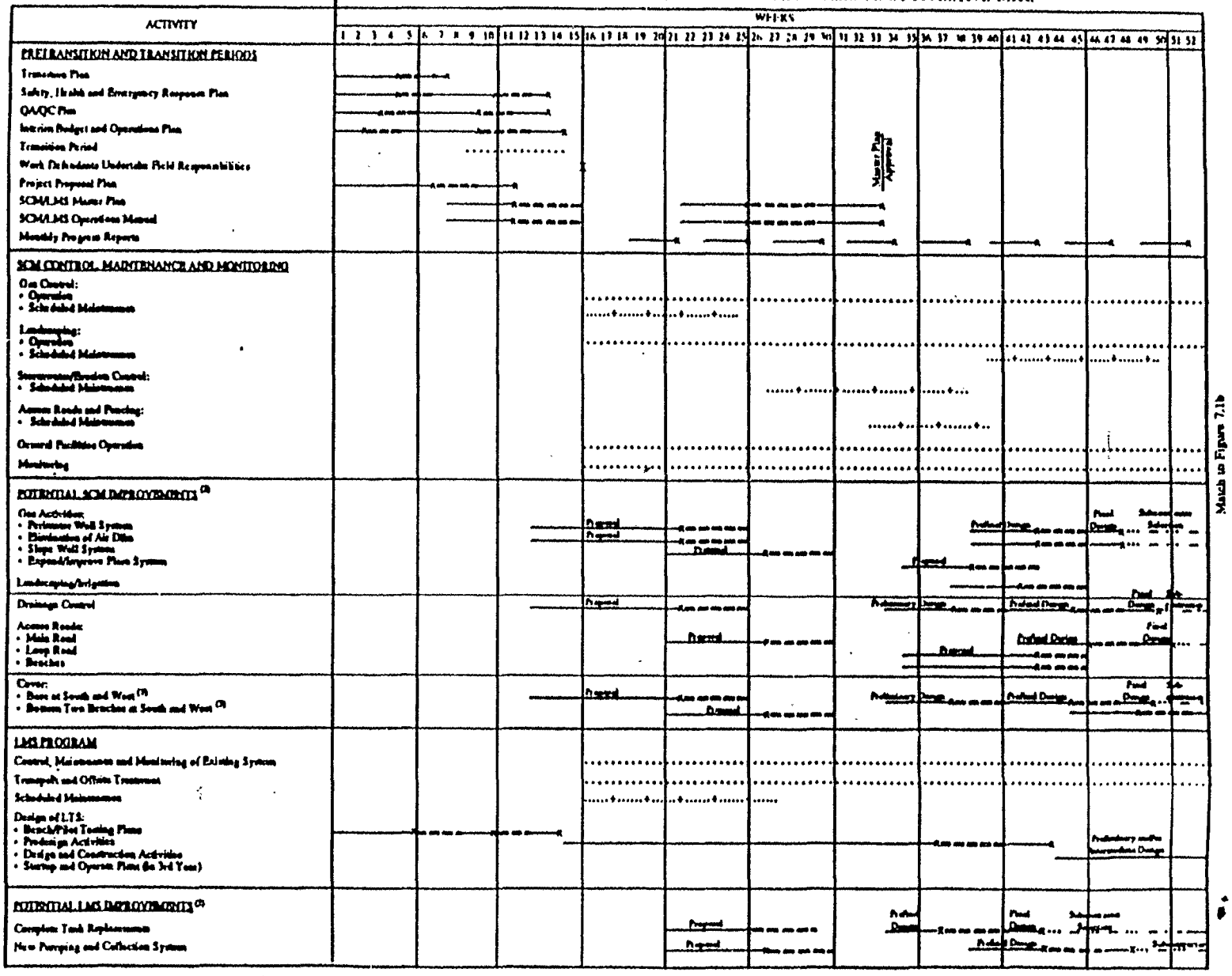
4. Table 7.1 presents the proposed budget for the 5-year program based upon performing the basic site control functions, constructing an on-site treatment plant and performing the anticipated improvements. The budgets for each period correspond to activities shown in the schedules.

5. The proposed data are described in the following subchapters:

   - 7.2 Potential Improvement Categories
   - 7.3 Proposed Schedule
   - 7.4 Proposed Budget

FIGURE 7.1a

PRELIMINARY AND PROPOSED SCM/LMS SCHEDULES FOR FIRST YEAR FROM EFFECTIVE DATE



Match to Figure 7.1b

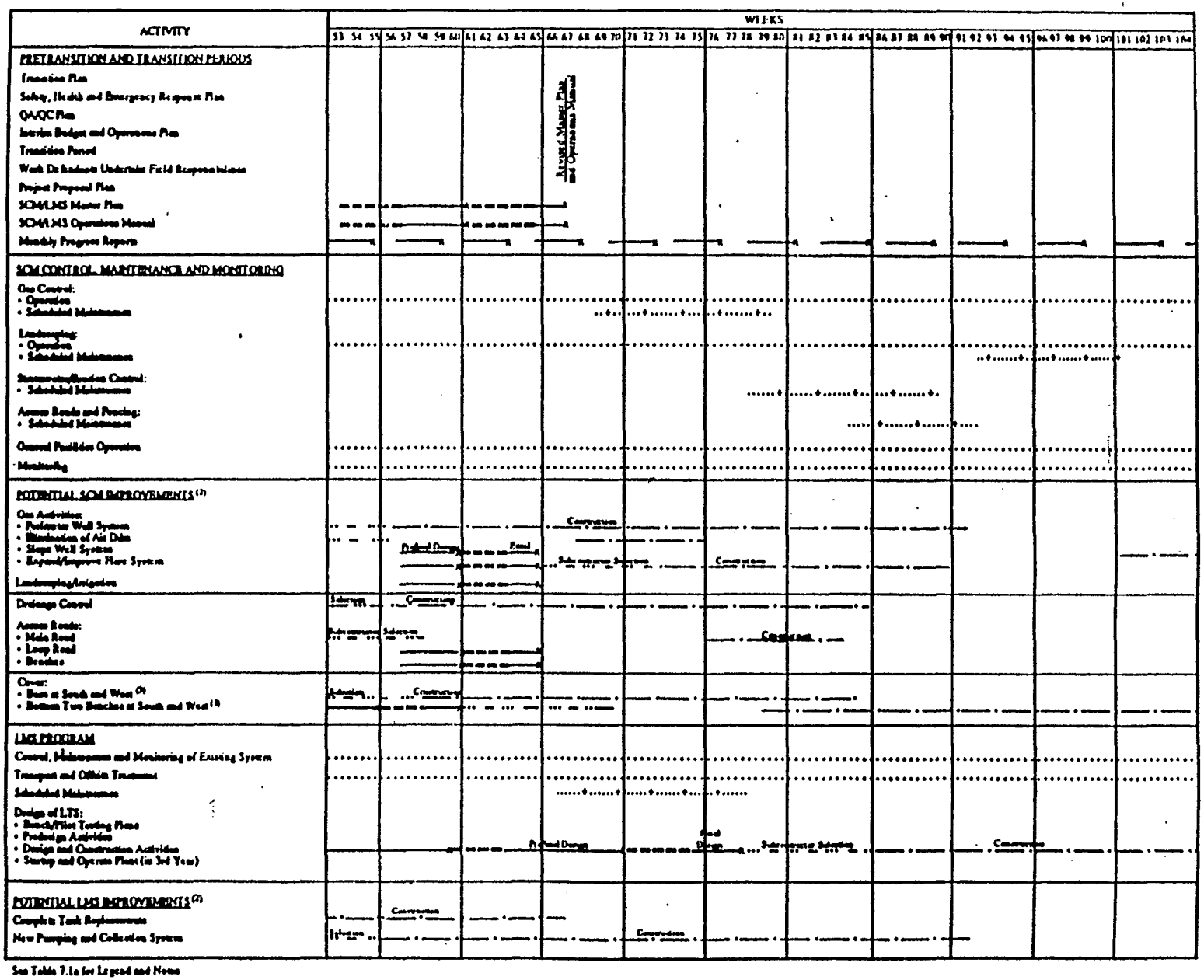
LEGEND:
- Studies, Designs, Plan Preparation, etc.
- EPA Review (1)
- Continuous Activities
- Scheduled Maintenance Activities
- Subcontractor Selection
- Construction
- Report, Plan, Designs, Etc

(1) EPA Review Periods are based on the following EPA estimates:
- Project Proposals and Plan Outlines - 2-4 weeks;
- Preliminary Designs - 3-5 weeks;
- Intermediate Designs 3-5 weeks;
- Prefinal Designs and Plans - 2-4 weeks

(2) The Project Proposals for improvements are planned early in the program to provide data for deciding if they will be done, and if so, the related schedule. The design and construction schedules shown are those initially proposed by the Work Defendants

(3) Proposals for the Base and Cover should be integrated and may be combined during the Project Proposal Plan development

FIGURE 7.1b
PRELIMINARY AND PROPOSED SCM/LMS SCHEDULES FOR SECOND YEAR FROM EFFECTIVE DATE



See Table 7.1a for Legend and Notes

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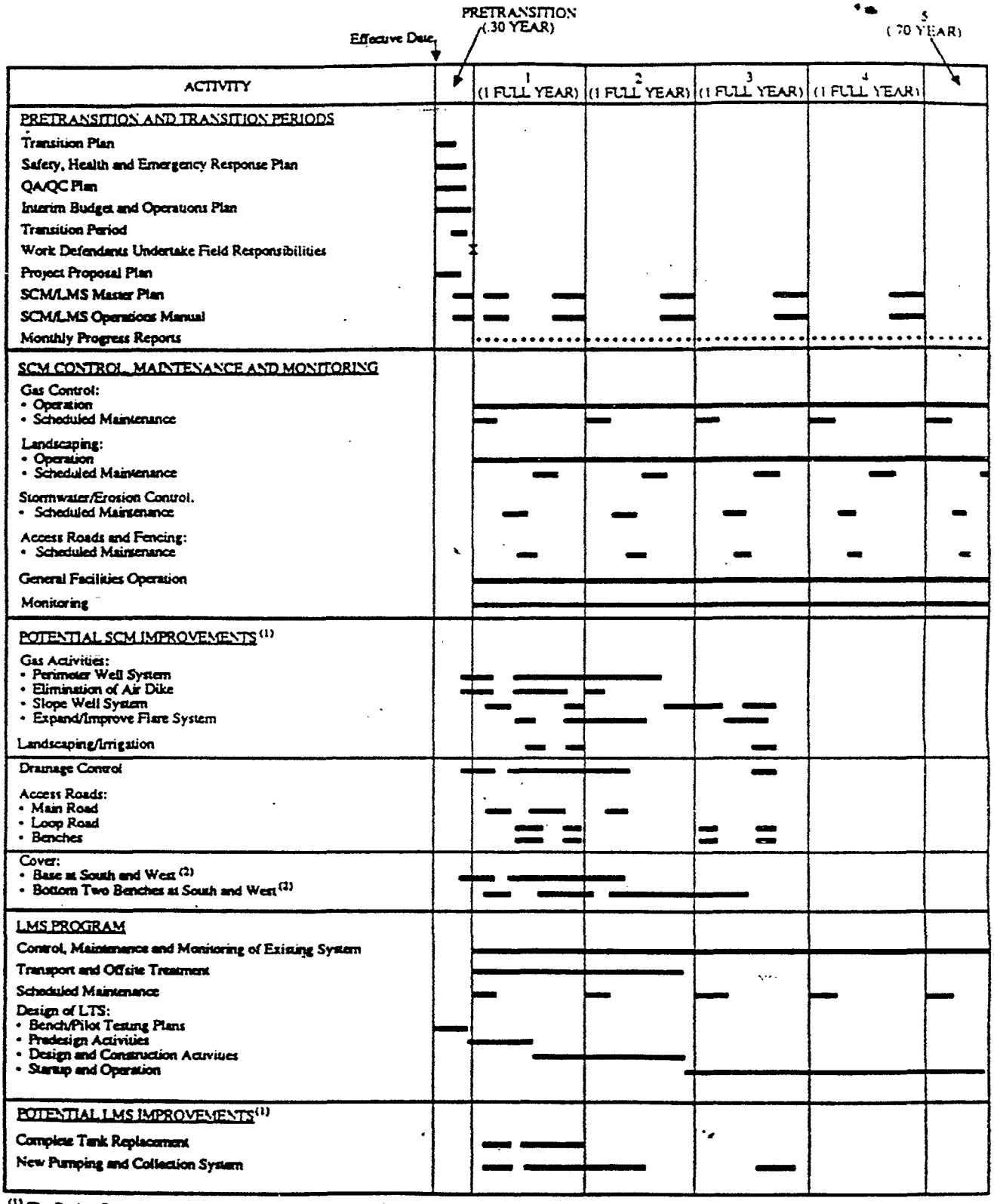
FIGURE 7.2
EXAMPLE 5-YEAR SCM/LMS SCHEDULE
(See Figures 7.1a & b for Details of First Two Years)



(1) The Project Proposals for Improvements are planned early in the program to provide data for deciding if they will be done, and if so, the related schedule. The design and construction schedules shown are initially proposed by the Work Defendants.

(2) Proposals for the Base and Cover should be integrated and may be combined during the Project Proposal Plan development.

5/18/88 12:30 p.m.

TABLE 7.1

PROPOSED SCM/LMS ESTIMATED COSTS[1] FOR 5-YEAR PERIOD ($000)

ACTIVITY	PRETRANSITION (.30 YEAR)	1 (1 FULL YEAR)	2 (1 FULL YEAR)	3 (1 FULL YEAR)	4 (1 FULL YEAR)	5 (.70 YEAR)	SUBTOTAL	CONTINGENCY	TOTAL
PRETRANSITION AND TRANSITION	450	320[2]	200[3]	200	200	160[4]	1,530	350	1,880
SCM CONTROL MAINTENANCE AND MONITORING	0	1,870	1,850	1,810	1,740	1,120	8,390	1,890	10,280
POTENTIAL SCM IMPROVEMENTS	60	1,900	3,060	1,380[5]	..[5]	..[5]	6,400	1,440	7,840
LMS PROGRAM	40	1,460	4,090	1,500	1,620	1,130	9,840	2,450	12,290
POTENTIAL LMS IMPROVEMENTS	0	410	200	760	..	..	1,370	340	1,710
SUBTOTAL	550	5,960	9,400	5,650	3,560	2,410	27,530		
CONTINGENCY	130	1,400	2,200	1,330	840	570	6,470		
TOTAL	680	7,360	11,600	6,980	4,400	2,980	34,000		

[1] This cost estimate projection will be refined as part of the initial SCM/LMS Master Plan.
[2] Includes completion of the SCM/LMS Master Plan and Operations Manual and 12 Monthly Reports.
[3] Includes revising of the SCM/LMS Master Plan and Operations Manual and 12 Monthly Reports.
[4] Includes revising of the SCM/LMS Master Plan and Operations Manual and 8 Monthly Reports.
[5] The overall contingency will be reevaluated at the time of each Master Plan revision, and if it becomes apparent that excess funds are becoming available, the Work Defendants may recommend additional improvement activities.

7.2 POTENTIAL IMPROVEMENT CATEGORIES

1. In order to prepare the schedule and budget, priorities for potential improvements will be established through the Project Proposal Plan and SCM/LMS Master Plan approval process, described in Chapter 4.0. For purposes of this document, the potential improvements are preliminarily divided into the following 3 categories, which are then used to develop the proposed budget and schedule set-forth herein:

   - Category I - Those improvements which should be decided upon before finalization of the SCM/LMS Master Plan, because of their importance to the overall planning and control activities. These include:
     - Expansion of the gas perimeter well system.
     - The air dike replacement.
     - Procedures for improving drainage control.
     - Construction requirements at the base along the south and west boundaries.
   - Category II - Those improvements which should be well defined, but not necessarily decided upon, at the time of preparation of the SCM/LMS Master Plan because of their potential importance for deciding upon: (1) a Category I item or (2) maintenance and minor improvements which might be undertaken during the first year of SCM/LMS activities. These include:
     - Placement of cover on the bottom two benches (e.g. bottom 80 feet) of the south and west slopes.
     - Installation of slope gas/leachate extraction wells.
     - Additional improvements to the existing liquid collection and storage system.
     - Installation of additional pumps in wells and the related collection system.
   - Category III - Those improvements which: (1) cannot be defined until higher category items are decided upon or (2) do not have significant potential importance to the first year of activities in the Master Plan. These include:
     - Improving the existing flare stations.
     - Landscaping/irrigation improvements.
     - Access Road Improvements.

2. The following subchapters describe why each item is included in the specific category for the proposed schedule and budget.

7.2.1 CATEGORY I IMPROVEMENTS

1. Both the Work Defendants and EPA believe that gas migration at the south and west boundaries should be reduced and that apparent undesirable aspects of the air dike should be addressed as soon as possible. Therefore, some improvements to the perimeter control system and elimination of the air dike should be accomplished during the first year, if possible.

2. Drainage control is considered to be important because the potential for Site damage to occur in the event of a large storm; and drainage control is related to most other SCM/LMS systems since: (1) its configurations must be compatible with these other systems and/or (2) the failure of the drainage system could affect the integrity of these other systems. Therefore, drainage control for the Site appears to be an improvement which should be evaluated as early as possible.

3. An early decision as to whether to conduct an improvement to establish a working foundation on the south and west boundaries is very important because this factor will directly affect other site activities including:

   - Placement procedures and the potential effectiveness of the gas perimeter control and monitoring system.
   - Procedures for drainage control on the landfill deck and south and west slopes.
   - Procedures for further modifying the existing collection and storage tank system.
   - Access road improvement and maintenance procedures
   - The feasibility of installing cover on a portion of the slope.
   - The feasibility of installing gas and leachate recovery wells on the south and west slopes.
   - If and how landscaping/irrigation changes should be made on the south and west slopes.

   Because of the importance of this activity to the control and maintenance for much of the Site, based on current information it appears appropriate to thoroughly evaluate alternatives for preparing the base of the south and west slopes as early as possible, and to include appropriate modifications, if any, into the first years' SCM/LMS Master Plan.

7.2.2 CATEGORY II IMPROVEMENTS

1. A decision regarding cover on the bottom two benches may not be required for the initial SCM/LMS Master Plan. However, it will be important to consider the potential configurations for such cover so that its potential importance to other items (e.g., base preparation, perimeter well placement, the potential for slope gas/leachate extraction) is well understood. The proposed schedule provides that proposal for providing cover be completed prior to completion of the Master Plan, although EPA's review and decision may occur later

2. The possible timing of the installation slope wells for gas and/or leachate extraction will have an impact on: anticipated gas control performance; treatment plant capacity requirements, and flare station capacity requirements. The proposed schedule also provides for the Project Proposal for this activity to be completed in time for its probable implementation schedule to be considered in the Master Plan.

3. Further improvements to the existing liquid collection system will require integration with most other improvement activities. To minimize potential conflicts or the need to duplicate the same improvement work in successive years, the basic planning of these improvements are expected to be accomplished in time for consideration in the SCM/LMS Master Plan.

4. The schedule and location for installing additional pumps could have a direct effect on the predesign activities for the LTS system. For example: (1) the numbers and locations of pumps will determine the potential volume and quality of leachate which could be made available for treatment, and (2) the potential extraction locations will be important for planning of collection, transportation and possibly pretreatment aspects of the LTS.

7.3 PRELIMINARY AND PROPOSED SCHEDULES

1. Figures 7.1a and b show detailed preliminary and proposed (for improvement) schedules for the SCM/LMS activities. Appropriate portions of the schedule shall be used for specific activities, until the first year SCM/LMS Master Plan is completed, or the need for changes are identified as the initial activities are being implemented.

2. Figure 7.2 shows an example schedule for a 5-year period. As appropriate, schedules shall be periodically updated or modified to reflect the entire SCM/LMS program.

3. The proposed schedules for potential improvements reflect the categories presented above These portions of the schedules will be modified by the Project Proposal Plan

7.4 PROPOSED BUDGET

1. Table 7.1 presents the Work Defendants' Proposed Budget for the 5-year SCM/LMS period. as estimated costs, in the following sequence:
   - The pretransition and transition activities during the first 0.3 years,
   - Proposed budgets for the next 4 full years, and
   - A fifth, partial (approximately 0.7) year.

2. Estimated costs for the Pretransition period correspond to the activities shown during the first 15 weeks on Figure 7.1a, including 6 weeks of in-field transition activities

3. The estimated costs for years 1 to 5 in the Pretransition and Transition Category are for revising the Master Plan and Operations Manual, and preparing the Monthly Progress Reports.

4. Costs budgeted for improvements are based on experience by the Work Defendants with similar activities at other locations. Each of these estimates shall be updated and substantiated as part of the Project Proposal Plan (Chapter 4.0, Item 9) and individual improvement Project Proposals (Subchapter 8.2) prepared for EPA's review and approval.

5. Significant cost contingencies are provided for each year's activity. If, as the work progresses, it becomes apparent that the contingency for the first years is not being utilized, the Work Defendants may recommend additional improvements to further increase control performance, reduce control and maintenance costs, or reduce final remedy requirements. Examples of such additional improvements could be:
   - Providing cover for additional benches on the west and/or south sides.
   - Providing for options for cover on the north and/or east sides.
   - The installation of additional slope gas/leachate extraction wells.

8.0 REPORTING AND REVIEW PROCESS (DELIVERABLES)

8.1 INTRODUCTION

1. Figures 8.1a to 8.1d illustrate the types of review procedures for the various deliverables required of the Work Defendants under this Decree. Deliverable schedules are presented in Chapter 9.0.

2. The contents of the following types of documents are provided in the remaining sections of this chapter.

   - Subchapter 8.2: Project Proposals
   - Subchapter 8.3: Type 1 Review Procedures
     These procedures will be used for approval of:
     - Monthly Progress Reports
     - Improvement Closeout Reports
     - Transition Plan
   - Subchapter 8.4: Type 2 Review Procedures
     These procedures will be used for approval of:
     - Designs
     - Original plans, such as:
       - Safety Plans
       - QA/QC Plans
       - Interim Operations and Budget Plan
       - SCM/LMS Master Plan
       - Operations Manual
     - Annual Revisions to Plans
   - Subchapter 8.5: Type 3 and 4 Review Procedures
     These procedures will be used for moderately complex or complex designs, as appropriate.
   - Subchapter 8.6: LTS Design, Construction and Startup
   - Subchapter 8.7: Emergency Repair

3. Several of the review procedures shown in the figures include review conferences to assist efficient and effective coordination between the Project Coordinators. Details of the review process, including review conferences, if appropriate, shall be established by the EPA and

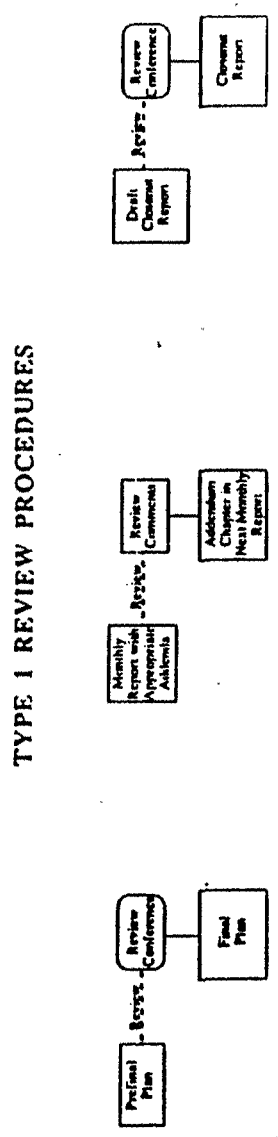
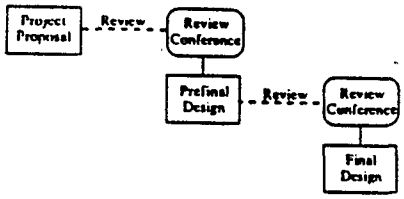
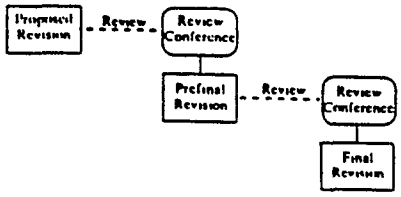


FIGURE 8.1a
TYPE 1
REVIEW PROCEDURES

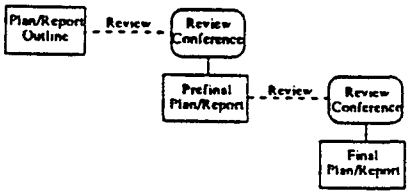
TYPE 2 REVIEW PROCEDURES



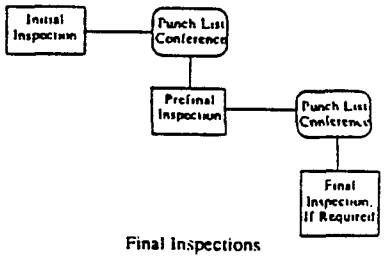
Relatively Simple
and Non-controversial Designs



Annual Revisions
to Plans



Original Plans
and Work Completion Report

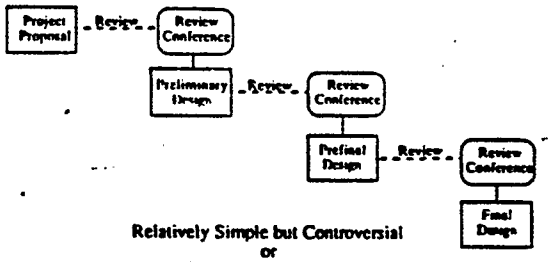


Final Inspections

FIGURE 8.1b
TYPE 2
REVIEW PROCEDURES

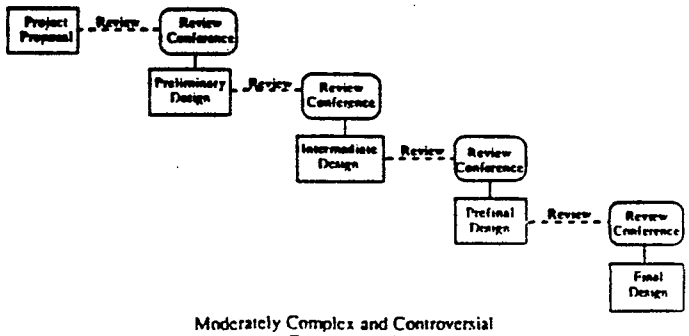
8.3

TYPE 3 REVIEW PROCEDURES



Relatively Simple but Controversial
or
Non-controversial but Moderately Complex Designs

TYPE 4 REVIEW PROCEDURES



Moderately Complex and Controversial
or Complex Designs

FIGURE 8.1c
TYPE 3 AND TYPE 4
REVIEW PROCEDURES

8.4

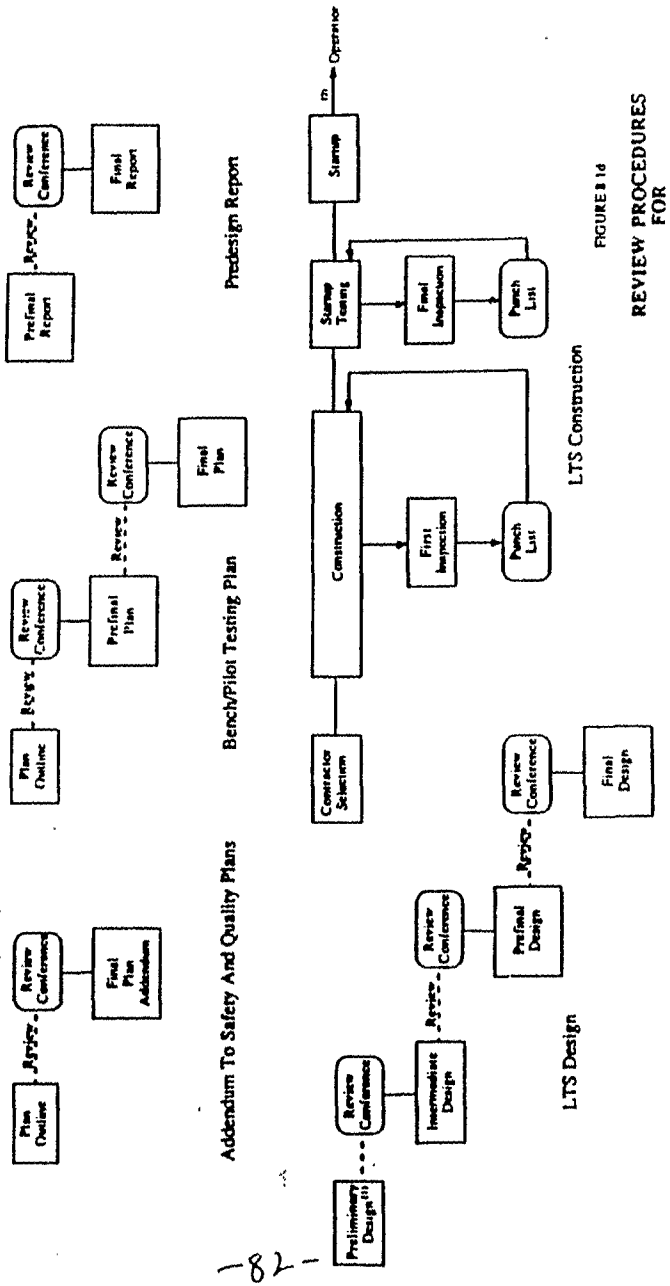


FIGURE 8.1d
REVIEW PROCEDURES FOR LTS WORK

(1) The preliminary design step may not be required, as determined as part of the Predesign report.
(2) See Fig. 8.1a for Closeout Report procedures.

Work Defendants' Project Coordinators, and will be specified in the SCM/LMS Master Plan. The following guidelines will be used to establish the appropriate review process:

- The EPA Project Coordinator will coordinate with the Work Defendants' Project Coordinator, and will estimate the length of each review period at the time the initial submittal (e.g., Project Proposal, Plan Outline) is approved. Those review periods will be estimated on a case-by-case basis, considering anticipated complexity, numbers of reviewers, etc.
- At the time of each submittal, the EPA Project Coordinator may specify the date and location for the Review Conference to be conducted, if any.
- The EPA Project Coordinator may establish a standardized, project "comment form," for reviewers to use for submitting comments, or establish other procedures for incorporating review comments.
- During the review process, each comment shall be discussed, if appropriate, and the EPA Project Coordinator may designate one of the following actions for that comment or establish other appropriate procedures for incorporating review comments:
  - Accepted - The Work Defendants will incorporate the comment into the next deliverable.
  - Accepted as Modified - The Work Defendants will incorporate the modified comment into the next deliverable.
  - Rejected - The comment need not be considered further.
  - To Be Studied - The Work Defendants will further evaluate the comment and will report the results and related action in the next deliverable.
  - Duplicate - The comment is a duplicate of a prior comment which was resolved.
  - Withdrawn - The commentor withdraws the comment.
- EPA comments, in writing, shall be responded to and changes made, as appropriate, in the subsequent deliverable.

4. Figures 8.1a, 8.1b, 8.1c and 8.1d illustrate the review procedures. As appropriate, the Work Defendants shall include a discussion about how the "Accepted," "Accepted as Modified," and "To Be Studied" items are included, at the time the subsequent deliverable is submitted.

8.2 PROJECT PROPOSAL

1. Consideration for each new improvement identified in the SCM/LMS Master Plan begins with preparation of a Project Proposal. This proposal will be used by EPA in making a determination of whether all or a portion of the improvement will be implemented. The proposal will also provide a recommendation and supporting information on the type of

review procedure (Type 2, 3 or 4) that shall be used for the improvement, if implemented, for EPA evaluation and approval. Project proposals shall include at least the following items:

- Summary of Proposed Improvement
- Need for the Improvement
- Evaluation of Other Alternatives
- Operational Impact
- Cost Impact
- Health and Safety Impact
- Schedule for Implementation of the Improvement
- Design/Implementation Precautions
- Alternatives for Implementation
- Future Implications/Consistency with Final Remedy
- Proposed Review Procedure Type and Schedule

8.3 TYPE 1 REVIEW PROCEDURES

8.3.1 MONTHLY PROGRESS REPORTS

1. Each Monthly Progress Report will include chapters for at least the following items:
   - Introduction.
   - Site and Systems Monitoring Results by activity type (e.g., perimeter gas extraction system, liquids collection) using computerized MIS summary forms including preliminary interpretation of data when possible. Specific data will be provided as appendices.
   - Maintenance and repairs accomplished.
   - The status of improvements being accomplished.
   - The monthly progress report for the LTS, when appropriate.
   - Public and agency interactions.
   - A report on special actions or activity startups planned for the next month.
   - Deliverables or Project Proposals submitted during the month.
   - A list of deliverables to be submitted and their corresponding submittal dates for the following month.
   - QA/QC data received during the month.
   - A report on any unanticipated problems encountered or emergency actions undertaken and their resolution, including estimates of their potential impacts to system integrity, schedule or budget.
   - Schedule and cost update in relation to the annual projections.
   - An addendum to prior months' reports to include comments received and responses to those comments.
   - Identification of significant budget increases.

2. The monthly progress reports for December, March, June and September shall include a quality assurance report. This report shall contain information which demonstrates that the Work Defendants are complying with the requirements of Section XII (Quality Assurance/Quality Control) and the QA/QC Plan established pursuant to this Decree.
3. EPA comments to any prior Monthly Progress Report will be submitted to the Work Defendants' Project Coordinator. EPA comments received more than two weeks prior to a monthly report will be addressed in that month's report; other EPA comments will be addressed in the following month's report.

8.3.2 CLOSEOUT REPORTS

1. An Improvement Closeout Report will include at least the following information.
   - Introduction.
   - As-built plans and specifications.
   - Quality Control Records.
   - Explanation of significant changes which occurred compared to the design, and the potential impact of those changes on performance.
   - Discussion of actual expenditures vs. budget projection.
   - Importance of the project experience to future project activities.
   - Suggestions for modifications which should be made to future construction of similar or related items.

8.3.3 TRANSITION PLAN

1. The Transition Plan content, described in Chapter 4.0, will be used to prepare the Prefinal Plan. A Plan Outline is not required.

8.4 TYPE 2 REVIEW PROCEDURES

8.4.1 RELATIVELY SIMPLE DESIGNS

1. Prefinal Designs shall include at least the following items:
   - Permits and approvals obtained, where appropriate.
   - Access plans, where appropriate.
   - Final flow diagrams and preliminary P&IDs, when appropriate.
   - A General Arrangement Plan showing the improvement in relation to other existing or planned conditions.
   - Minimum dimensions to property lines, when appropriate.
   - Design plans suitable for construction.
   - Special Conditions and Construction Specifications.
   - Engineering calculations, when appropriate.
   - A Startup Plan, when appropriate.

- Addenda to the Safety, QA/QC, Sampling, Operations Manual, as appropriate.
- A construction schedule indicating significant milestones.
- Value engineering where potential for substantial cost savings exists.

The prefinal design submission shall represent at least the 90 percent design completion level

2. Final designs shall include all of the items in the prefinal design package with changes made, as appropriate, reflecting EPA Comments.

8.4.2 ORIGINAL PLANS

1. Required items to be included in original plans are provided in Chapter 4.0, Scope of Work for Pretransition and Transition Activities. Types of original plans include:
   - Safety, Health and Emergency Response Plan
   - QA/QC Plan
   - Interim Operations and Budget Plan
   - Project Proposal Plan
   - SCM/LMS Plan
   - Operations Manual

8.4.3 ANNUAL REVISIONS TO PLANS

1. Each year the SCM/LMS and Operations Manual will be revised (updated) to reflect: (1) changes which have occurred at the site and (2) plans for the upcoming year. As a part of this process, the Safety and QA/QC plans shall also be revised, if appropriate, to reflect changes which have occurred.

2. Each portion of the plans (see Chapter 4.0) will be reviewed and modified by the Work Defendants to incorporate addenda prepared during the prior year, and to reflect other changes determined to be necessary to make the plans current for conditions at that time.

3. When improvement designs or significant maintenance repairs are made during the year, addendum to the general plans shall be made to direct related field activities for the remainder of the year. Those addenda shall include discussions for each relevant section in the plan. The addenda for each year will be incorporated into the annual revision

8.4.4 WORK COMPLETION REPORT

1. Prior to the completion of the Work outlined in this Scope of Work, and in accordance with the Decree, the Work Defendants shall submit a Work Completion Report. The report shall contain at least the following items, as appropriate, (with the exception of all data collected or developed during the 3 months prior to completion of the work which shall instead be submitted to EPA in the Monthly Progress Reports):
   - Introduction.
   - Description of all SCM/LMS facilities.
   - Summary of SCM activities currently being performed.
   - List of manuals, plans, reports and current addendum to those documents which are being used for the SCM/LMS activities.
   - List of potential site improvements not yet completed.
   - Manpower allocations and cost summaries for the past 12 months of SCM/LMS activities.
   - SCM/LMS monitoring data summary for the past 12 months.
   - Description of the phase out activities required.
   - Certification that the Work has been completed in accordance and in full compliance, or that Work Defendants have otherwise satisfied their obligations in accordance and in full compliance, with the Decree.
   - If Work Defendants' obligations under the Decree terminate before completion of the Work, this report shall also include a description of and status report on Work activities yet to be completed.

8.5 TYPE 3 AND 4 REVIEW PROCEDURES

8.5.1 MODERATELY COMPLEX AND COMPLEX DESIGNS

1. The Project Proposals shall include the items discussed in Subchapter 8.2.

2. The Prefinal and Final Design Packages requiring Type 3 and Type 4 Review Procedures have the same content requirements as designs requiring Type 2 Review Procedures (Subchapter 8.4.1).

3. The added design steps (Preliminary and/or Intermediate) also require data to be submitted for each of the topics required for the Prefinal Design Package. The level of detail provided should reflect approximately the following levels of design completeness:
   - Preliminary Design: Approximately 30 percent
   - Intermediate Design: Approximately 60 percent

8.6 LTS DESIGN, CONSTRUCTION AND STARTUP

1. Subchapters 6.4.1 through 6.4.3 describe the predesign, design and construction procedures required for the LTS. The types and numbers of design review packages shall be determined based on the recommendations provided with the predesign package.

2. The review procedure is illustrated in Figure 8.1d.

8.7 EMERGENCY REPAIRS

1. Refer to Safety, Health and Emergency Response Plan for immediate actions required.

2. After immediate health and safety concerns have been addressed, Work Defendant Project Coordinator shall develop a proposed plan for further action, if necessary and appropriate, and submit it to EPA for approval. Such plan shall be submitted within 7 days unless otherwise agreed to by EPA after consultation with the Work Defendants. Such plan shall include at least the following items:

   - Schedule for necessary repairs.
   - Identification of any resulting improvement proposals, including type of deliverables required and implementation of schedule.

9.0 SCHEDULES

1. This chapter provides schedules for items required by the Work Defendants as discussed in Chapter 8.0. If EPA determines it is appropriate, the time periods set forth under this schedule may be extended without requiring a formal modification of the Decree. Requests for schedule modifications made by the Work Defendants should include a discussion of the reasons for the request. To the extent appropriate, Work Defendants shall confirm to EPA the calender date of subsequent deliverables.

9.1 SCHEDULE FOR ITEMS COMMON TO SCM AND LMS

9.1.1 PRETRANSITION AND TRANSITION PERIODS

- Transition Plan
  - Prefinal Plan: 4 weeks after the effective date of the Decree.
  - Final Plan: 2 weeks after receipt of EPA comments.
- Safety, Health and Emergency Response Plan
  - Plan Outline: 4 weeks after effective date of the Decree.
  - Prefinal Plan: 4 weeks after receipt of EPA comments.
  - Final Plan: 1 week after receipt of EPA comments.
- QA/QC Plan
  - Plan Outline: 3 weeks after effective date of the Decree.
  - Prefinal Plan: 4 weeks after receipt of EPA comments.
  - Final Plan: 2 weeks after receipt of EPA comments.
- Interim Budget and Operations Plan
  - Plan Outline: 2 weeks after effective date of the Decree.
  - Prefinal Plan: 5 weeks after receipt of EPA comments.
  - Final Plan: 2 weeks after receipt of EPA comments.
- Transition with EPA Contractor
  - Begin: 1 week after Approval of Final Transition Plan.
  - End (Beginning of Work Defendants control of site): 1 week after EPA approval of Final Safety, Health, Emergency Response, QA/QC and Interim Budget and Operations Plans. If greater than 8 weeks of Transition Activities occur, a reduced personnel plan shall be established to be in effect until transfer of responsibility occurs.

- Project Proposal Plan
  - Prefinal Plan: 6 weeks after effective date of the Decree.
  - Final Plan: 2 weeks after receipt of EPA comments.
- First Submittal of SCM/LMS Master Plan
  - Outline: 2 weeks after EPA comments on the Prefinal Project Proposal Plan.
  - Prefinal Plan: 13 weeks after EPA approval of the Final Project Proposal Plan, but not earlier than 6 weeks after receipt of EPA comments on Master Plan Outline.
  - Final Plan: 4 weeks after receipt of EPA comments.
- Operations Manual
  - Outline: 2 weeks after EPA comments on the Prefinal Project Proposal Plan.
  - Prefinal Plan: 13 weeks after EPA approval of the Final Project Proposal Plan, but not earlier than 6 weeks after receipt of EPA comments on Master Plan Outline.
  - Final Plan: 4 weeks after receipt of EPA comments.

9.1.2 EMERGENCY REPAIRS

- Repair Proposal: EPA Project Coordinator to be notified as early as possible. Schedule of other deliverables shall be agreed to pursuant to Subchapter 8.7.
- Emergency Repair Closeout Report: 2 weeks after completion of the repairs.

9.1.3 TYPE 1 REVIEW PROCEDURES (Figure 8.1a)

- Monthly Progress Reports: 14th day of each month.
- Incident or Emergency Response Reports: Included in Monthly Report.
- Closeout Draft Report: 4 weeks after construction completion.
- Closeout Final Report: 2 weeks after receipt of EPA comments.

9.1.4 TYPE 2 REVIEW PROCEDURES (Figure 8.1b)

- Type 2 Designs
  - Project Proposal: Date to be determined.

  - Prefinal Design: 4 weeks after receipt of EPA approval of proposal or as agreed to by the EPA Project Coordinator
  - Final Design: 2 weeks after receipt of EPA comments or as agreed to by the EPA Project Coordinator.
- Annual Revisions to the SCM/LMS Master Plan and Operations Manual
  - Proposed Revision: The later of 9 months following EPA approval of prior year's subject approval, or the anniversary date of the Decree effective date.
  - Prefinal Revision: 4 weeks after receipt of EPA comments.
  - Final Revision: 2 weeks after receipt of EPA comments.
- Original Plans: These schedules are included in the Pretransitional and Transitional activities.
- Final Inspections
  - Initial Inspection: At the appropriate construction stage agreed upon with the EPA Project Coordinator.
  - Punch List Conference: By all inspection personnel on the same day the Prefinal Inspection is completed.
  - Prefinal and Final Inspection(s): On the day agreed to by EPA Project Coordinators at the Punch List Conference.
- Work Completion Report
  - Report Outline: 3 months prior to Work completion or termination, or estimated date of termination pursuant to funding limitations of paragraph C of Section IX (Work to be performed) of the Decree.
  - Prefinal Report: 4 weeks after receipt of EPA comments.
  - Final Report: 2 weeks after receipt of EPA comments.

9.1.5 TYPE 3 AND 4 REVIEW PROCEDURES (Figure 8.1c and 8.1d)

- Type 3 Designs
  - Project Proposal: Date to be determined.
  - Preliminary Design: 4 weeks after receipt of EPA approval of proposal or as agreed to by the EPA Project Coordinator.
  - Prefinal Design: 4 weeks after receipt of EPA comments or as agreed to by the EPA Project Coordinator.
  - Final Design: 2 weeks after receipt of EPA comments or as agreed to by the EPA Project Coordinator.
- Type 4 Designs
  - Project Proposal: Date to be determined.
  - Preliminary Design: See Note 1.
  - Intermediate Design: See Note 1.
  - Prefinal Design: See Note 1.
  - Final Design: See Note 1.

Note 1: The Project Proposal for Type 4 Designs shall include the periods required for each design step. The approved Project Proposal shall then specify the length of time allowed between each comment period and the subsequent design submittal.

9.2 LTS SCHEDULE

9.2.1 PREDESIGN ACTIVITIES

- Bench/Pilot Testing Plan
  - Outline: 4 weeks after the effective date of the Decree.
  - Prefinal Final Plan: 2 weeks after the receipt of EPA comments.
  - Final Plan: 2 weeks after receipt of EPA comments.
- Predesign Report
  - Prefinal Report: 22 weeks after date of EPA approval of Bench/Pilot Testing Final Plan.
  - Final Report: 3 weeks after receipt of EPA comments.

9.2.2 LTS DESIGN

- Preliminary Design: 7 weeks after EPA approval of Final Design Report.
- Intermediate Design: 6 weeks after EPA approval of Preliminary Design, or 13 weeks after approval of Final Design Report if a Preliminary Design is not required.
- Prefinal Design: 9 weeks after receipt of EPA comments.
- Final Design: 3 weeks after receipt of EPA comments.

9.2.3 LTS CONSTRUCTION

- Contractor Selection: 8 weeks after EPA approval of Final LTS Design.
- Construction Schedule, Safety and Sampling Plan Addendums and LTS Operations Manual Addendum: Included in the Final LTS Design Package.
- Monthly Progress Reports: Included in SCM/LMS Monthly Progress Report.
- First Completion Inspection: To be agreed on with the EPA Project Coordinator.
- Final Completion Inspection: To be agreed on with the EPA Project Coordinator at the first Inspection Punch List Meeting.

9.2.4 LTS STARTUP

- Pre-Startup Equipment Testing: Schedule included in Final LTS Design Package.
- Startup Activities Begin: As established in approved LTS Startup Section of the SCM/LMS Operations Manual.
- Startup Activities End: As established and approved in LTS Startup and Operations Manual.
- Final LTS Closeout Report: 8 Weeks after end date of Plant Startup Section (6.4.6)

EXHIBIT I

1.0 SYSTEM DESCRIPTIONS

1.1 ACTIVE CONTROL SYSTEMS

This category includes components related to the leachate and gas control systems and site irrigation at the OII site. Some components are integral to both gas and leachate management.

1.1.1 Gas Measurement. Landfill gas is controlled by 3 active subsystems: The Interior Gas Extraction System, the Perimeter Gas Extraction System, and the Perimeter Airdike System. (Figures 1.1 and 1.2)

1.1.1.1 Interior Gas Extraction System. The interior gas extraction system was installed and operated by Getty Synthetic Fuels, Inc. (GSF) form 1978 to 1986. The gas system was originally designed to recover high quality gas for commercial use. The gas processing plant has been removed and recovered landfill gas is now flared (incinerated). This system extracts landfill gas from the center of the landfill. The system consists of a matrix of vertical extraction wells and horizontal surface collectors, a network of conveyance piping, and a flare station. Figure 1.1 identifies the location of major system components. The current rate of extraction is approximately 2 to 2.5 mmscfd.

Wellfield. The interior wellfield consists of wells, surface collectors, header lines, and valve vaults.

Wells. There are 60 wells in the interior extraction wellfield located on the top deck of the landfill. Wells are constructed of PVC (tandem and vertical wells) or carbon steel pipe (pile driven wells), and range in depth from 140 to 270 feet.

Surface Collectors. Ten surface collectors also extract gas from the top deck of the landfill. Surface collectors consist of a gas-impermeable membrane placed over a gravel bed and covered with a layer of soil ranging from a few inches to 20 feet in depth. A network of shallow (up to 30 feet deep) wells and horizontal HDPE perforated pipe (trenches) conveys landfill gas from beneath each membrane to a central collector pipe.

Conveyance Components. Wells and surface collectors are connected to subsurface HDPE header lines which carry the extracted gas to the flare station. Valves along the header lines allow flow adjustment or total shut-off of various areas of the well field. Barometric traps at various points allow condensate to drain from the lines into the landfill. The depth of the header lines for the interior extraction system is estimated at 30 feet deep. Valves for the header lines are located in 6 vaults on the top deck of the landfill.

Flare Station. The interior flare station compound is located on native soil in the northwest corner of the south parcel. The interior flare station consists of all piping, instrumentation, and equipment downstream of a 22' flange between the high density polyethylene (HDPE) line from the well field and a stainless steel section leading into the condensate knockout tank. The flange is located at the extreme southeast corner of the flare station compound.

Condensate Removal. Landfill gas first passes through a horizontally mounted knockout tank, where condensate is separated from the gas stream. Liquid is automatically pumped from the knockout tank to a 6500 gallon polyethylene storage tank. Operation of the condensate pumps is controlled by tank-level switches. The storage tank is located on a dirt pad encased by a concrete berm. The condensate from the storage tank is removed by vacuum truck, as needed, for transport to an off-site treatment/disposal facility. A condensate blowpot and a basket strainer are also in-line upstream from the blower. The blowpot utilizes tank. Level switch and condensate is automatically transferred into the polyethylene storage tank. A vacuum switch for the basket strainer initiates blower shutdown in the event of an obstruction.

Blower (Compressor). A motor-driven Roots rotary lobe blower provides working pressure (vacuum) for the well field. The blower, motor, and an alarm annunciator panel are mounted on a concrete pad in the southeast corner of the flare station compound. Motor controllers for the compressors are mounted on a rack next to the flare station. Start and stop buttons for the blower, blower oil pump, cooling fan, condensate pumps, and compressor annunciators and alarms are located on a control panel in the same area.

Additional Appurtenances. After discharge from the blower, the landfill gas passes through an orifice plate and flame arrestor before entering the incinerator. A 7-day paper chart flow recorder continuously traces static and differential pressure readings at the orifice plate. These readings are used to calculate volumetric flow rates.

Incinerator. The incinerator stack (10'o.d. x 35' high) is located in the northeast corner of the flare station compound. Five burners are located inside the unit, with a fuel gas gun and pilot mounted on the central burner. Propane fuel gas (stored in a tank in the southeast corner of the compound) is designed to preheat the stack before the incineration of landfill gas. Two 3' x 6' air dampers located 180° opposed below the burner throat plate are automatically adjusted to maintain combustion temperature at a selected set point. Also mounted on the stack is an ultraviolet flame scanner, 2 stack thermocouples, and 3" sample ports.

The fuel gas train control panel and oxygen analyzer are mounted on a rack next to the incinerator stack. The panel contains control buttons and annunciators installed in a weatherproof enclosure. The fuel gas train consists of valves and piping that deliver propane to the pilot and preheat gas gun. The oxygen analyzer will shut the incinerator system down if the oxygen concentration reaches an upper limit of 13% by volume.

A strip chart recorder for stack temperature is located in the control panel. Stack temperature is presently kept at 1600° F by setting the temperature controller mounted in the control panel.

Instrumentation. The interior gas extraction system operates continuously as an unmanned plant. Station shutdown can occur from a number of faults initiated by the various system alarms. Plant shutdown events are called out by an autodialer machine located in the office building in the flare station compound. The autodialer can be programmed to call-up to 9 different phone numbers, and will repeat the call-out cycle until the alarm condition is rectified or the machine is physically turned off. The autodialer is on-line whenever the station is operating.

1.1.2 Perimeter Gas Extraction System. The perimeter gas extraction system was installed by Operating Industries, Inc., and is physically independent of the interior system. The current rate of extraction is approximately 1200 scfm. The perimeter system consists of the wellfield, the main flare station, and the auxiliary flare station, as presented in Figure 1.1

Wellfield.

Extraction Wells. The perimeter well field consists of a total of 79 wells at 50 locations on the north, south, and east boundaries of the site. Depths range from 20 to 180 feet, with some wells penetrating through the refuse cells into native soils. Wells and laterals are constructed of PVC pipe, with 2 casings installed in some wells.

Conveyance Components. Header lines convey extracted gas to the flare station and are constructed of Class 160 PVC pipe. Lines vary from 6 to 16 inches in diameter, and are generally buried no more than two feet below grade. Water traps at low spots along the header line allow condensate to drain from the piping into the landfill. Valves at all branches and at several intermediate points allow isolation or restriction of flow from various areas of the wellfield.

Main Flare Station. The main flare station is located on a graveled pad on native soil in the northwest portion of the landfill. The flange upstream of the condensate knockout is considered to be the flare station/well field boundary.

Condensate Removal. Landfill gas drawn to the main flare station passes through a vertically mounted mechanical condensate knockout tank immediately upon entering the station. The separated liquid flows by gravity into an underground 500 gallon sump, and is automatically pumped from the sump to the above-ground storage tanks, which also serve as on-site storage for the leachate collection system.

Operation of the condensate removal pumps is controlled by level switches. The pump cycles approximately once every 2 days depending on condensate inflow and dropout. Condensate can also be removed from the sump via a 4" stand pipe next to the pump grate.

Blower (Compressor). After condensate removal, the gas stream enters the steel header section and passes through 1 or more of the 3 Sutobilt rotary positive displacement blowers. The blowers are driven by 100 hp 1800 rpm electric motors. Gas discharged from the blowers passes through vertically mounted chamber-type silencers. Each of the silencer units is equipped with an acoustic enclosure to further reduce blower noise.

Additional Appurtenances. After passing through the silencers, gas flows through an orifice plate and flame arrestors to the flare stacks. The flow recorder operates continuously to record blower discharge flow rate. The recorder paper must be changed every 7 days.

Flares. The main flare station contains 3 flares (9'6" o.d. x 20' high) which are designed to handle a maximum flow of 1500 scfm each. Each flare is equipped with 2 manual louvers, 2 ultraviolet flame scanners, a stack thermocouple, a viewport, and 4 sampling ports.

Stack temperature is not automatically controlled in the perimeter flare system.

Openings at the base of the stacks must be manually covered or uncovered to maintain combustion temperature at the desired level.

Propane for ignition is stored in refillable 5 gallon tanks connected to a distribution manifold at the center of the station.

The main electrical panel in the compound contains the transformer, fuses, and motor control center for the station.

The control panel enclosure is located next to the main electrical panel and contains the stack temperature recorder, flare and condensate pump control switches, and annunciator lights.

Instrumentation. The perimeter gas extraction system operates continuously as an unmanned plant. Flare shutdowns, due to safety alarms or power failures, are annunciated by lights on top of the control panel enclosure. However, there is no automatic dialing system for notifying site management in the event of a shutdown. Visual inspection is necessary to verify proper station operation.

Auxiliary Flare Station. The auxiliary flare station is operated only as a backup to the main station - the 2 are never on line simultaneously.

The auxiliary flare station is located at the southwest corner of the site. The compound, which also contains the Airdike System compressors (described in Compressor Station), is constructed on refuse fill and is experiencing differential settlement.

The auxiliary flare station is linked to the perimeter system header lines, and consists of 2 centrifugal type blowers and 2 flare stacks. Piping is Schedule 40 PVC throughout. As at the main station, gas passes through flame arrestors and is then incinerated. The flare stacks themselves are generally corroded and in poor condition. Each flare is designed for a maximum of 500 scfm flow. Flare stacks include an ultraviolet flame scanner and thermocouple. Stack pilots are fueled with propane. Stack temperatures are continuously recorded, but flow is not. There is no condensate knockout or collection at the auxiliary flare station. There are no devices for regulating stack temperatures.

The auxiliary station operates similarly as an unmanned station, although there is no electrical annunciation of station failure. Visual inspection is necessary to verify continuous flare operation.

1.1.1.3 Airdike System. The Airdike System is located along the western and southwestern boundary of the site. The system is designed to inject air into the subsurface soil to form an air curtain in an attempt to prevent off-site subsurface migration of landfill gas. Operating Industries, Inc. installed this Airdike System rather than gas extraction wells in this area due to the potential for inundation of the wells of the south parcel. The airdike system consists of the compressor station, the wellfield, and the probes, as presented in Figure 1.1

Compressor Station. The compressor station (Figure 1.1) is located on a concrete pad in the southwest corner of the site, collocated with the auxiliary flare station.

Compressed air is supplied to airdike wells by two motor-driven identical positive displacement compressors, which operate in parallel. The system includes pulsation dampeners and a heat exchanger for cooling discharge air. Air flows from the cooler out to the well field through a 10" schedule 40 PVC line.

The main electrical panel is located next to the compressors. Compressor and cooler control panels are next to each unit.

The compressor station operates continuously as an unmanned facility. Station shutdown or malfunction is not annunciated. There is no automated recording of operating conditions.

Wellfield. The 34 airdike wells, approximately 100 feet apart on center, are constructed of 2 inch schedule 40 PVC pipe and are set into native soil. Wells range in depth from 15 to 158 feet and have perforated zones between 5 and 40 feet. The header lines, also constructed of PVC, are buried

from 2 to 10 feet below grade. The airdike header lines are not equipped with valves for flow adjustment or maintenance diagnostics. Well adjustments are made by throttling valves at each injection well head, or changing the size of the orifice plate used for flow measurement.

Airdike Probes. Airdike probes are located approximately 50 feet from each well on center. Probes are of PVC construction and sample from depths of 3 and 20 feet. There are a total of 34 probes and 41 sampling depths.

I.2 Leachate Collection Systems. Between 1980 and 1986, Operating Industries, Inc. installed portions of the leachate collection system on an as-needed basis as ordered by the South Coast Air Quality Management District (SCAQMD) to respond to leachate seeps. Prior to October 1984, collected leachate was mixed with incoming refuse and was redisposed of as part of the ongoing landfill operations. After the Regional Water Quality Control Board (RWQCB) prohibited this redisposal of leachate, OII began hauling the leachate off-site for disposal or treatment. In 1984, EPA assumed responsibility for leachate trucking and treatment when OII stated it could no longer afford to continue off-site treatment. EPA currently trucks all hazardous liquids generated at OII to an off-site treatment facility as part of the site control and monitoring activities. Approximately 4000 gallons of leachate per day is currently collected from the existing leachate collection system. This system does not collect leachate which has percolated deeper into the landfill and which may be contaminating groundwater. Components of the system may need modifications to improve leachate collection efficiency.

The existing system consist of various combinations of shallow french drains, extraction wells, disposal borings, sumps, pumps, leachate lines, underground collection tanks, and above-ground storage tanks installed in five portions of the southern parcel of the OII landfill site. The existing collection system is divided into Areas I through V as illustrated in Figures I.3 and I.4.

I.2.1 Area I Collection. Area I of the leachate collection system is located in the southeastern portion of the site. Although liquid waste disposal was not permitted in Area I, leachate seeps were reported here in 1981. The current collection system in this area of the landfill, which was installed in 1981, consists of shallow french drains and gravel trenches leading to thirteen 36-inch diameter disposal borings which are 70 to 100 feet deep and terminate in dry trash. Seven of the wells consist of gravel pack only with the remaining 6 cased with PVC pipe, although no in-place pumping mechanism currently exists for these wells. All disposal borings, except 2 of the PVC-cased wells, serve to collect leachate from a series of shallow (less than 5 feet deep) gravel trenches which are tied into the borings for redisposal into the landfill. No active pumping of leachate is currently conducted in Area I.

Site personnel suggest that the 2 unconnected wells were originally drilled as part of the gas extraction system, but were never connected to the system. No recent seeps in the southeastern portion of the OII site have been reported. One deep monitoring well, Well R, is also located in Area I.

Well R consists of a 6-inch casing extending from the top deck of the landfill, through the refuse fill, and into the native material below the fill. Well R was sounded on September 24, 1986, and showed 10 feet of liquids present in the bottom of the well. The well was originally constructed to monitor the water beneath the bottom of the fill.

A toe buttress was constructed by EPA as an emergency response action in early 1987 along the south/southeastern perimeter of the landfill in Area I to support the landfill slopes. As part of the buttress construction, a leachate collection system was installed consisting of collection pipes and three 1,000-gallon storage tanks designed to capture leachate migrating toward the site boundary. These storage tanks are not currently connected to the existing site leachate collection manifold. There has been no leachate detected in the tanks since their installation in February, 1987.

I.2.2 Area II Collection. Area II is located on the south/southeastern side of the landfill above the city of Montebello's Iguala park and consists of the eight 36-inch diameter wells at total depths of 70 to 80 feet, extending through approximately 10-15 feet of landfill refuse and into native earth material. The lower 60 feet of the wells consists of perforated PVC casing and gravel pack designed to directly intercept the leachate.

All of the wells are connected to the perimeter gas extraction system header line by a 1 1/2 inch PVC vapor collection line to extract gases from the well casing above the leachate.

Leachate from 5 of the 8 wells is pumped by electrically-powered impeller-type submersible pumps. The main switch-circuit breakers for these pumps are located at the irrigation control panel in the southwest corner of the site. One of the 8 wells is pumped by a manually-operated pneumatic air lift pump which is supplied by the air-cooled single stage Swan compressor located in the auxiliary flare station compound. This well was converted from a submersible pump to the pneumatic air lift pump due to frequent failures from oil, grease, and solids buildup.

The 2 newest wells are outfitted with automatic pneumatic ejector pumps which are supplied by the 2 positive-displacement reciprocating airdike compressors located in the auxiliary flare station compound. All eight wells are connected to a 4-inch collection manifold for discharge to the to the underground tanks in Area III described in Subparagraph I.2.3 of this section.

Four disposal borings which exist in Area II are not connected to the manifold and underground tanks. In the past, these borings have been pumped by vacuum trucks, although no pumping records are available. Recent investigation has indicated that the casings in all 4 borings have sheared at depths ranging between 15 and 28 feet.

I.2.3 Area III Collection. The main leachate collection system in Area III, the south/southwestern corner of the site, consists of a series of shallow (less than 5 feet deep) buried perforated pipes and trenches which discharge by

gravity into 3 buried steel tanks. The 3 tanks rest in a gravel bed at a crown depth of approximately 6 feet. The gravel bed is underlain by landfill refuse. Local leachate which collects in the gravel bed can flow into the tanks via a 4-inch local collection line, or into a horizontal 8-inch PVC pipe which is perforated through the depth of the gravel bed. The existing storage tanks are from old vacuum trucks and are suspected to be leaking.

Leachate collected in the buried tanks and gravel bed in Area III is pumped by a pneumatically operated diaphragm pump. Compressed air to operate the pump is supplied by the Swan compressor, described in Subparagraph I.2.2 located at the auxiliary flare station. Pumping is manually controlled utilizing a system of gate valves and is currently performed once per day. Leachate is pumped from the buried tanks and gravel bed through a 2 1/2-inch PVC line to the above-ground, on-site storage currently located west of Area IV.

Ongoing improvements to Area III include the installation of a new concrete sump with an automatic pumping system to replace the underground storage of leachate, replumbing leachate collection lines from the underground tanks to the sump, sandfilling and abandoning the underground tanks, and constructing french drains around the existing gravel bed. The existing pneumatic diaphragm pump, which is in poor condition, is currently being replaced with a flop-valve double diaphragm pump. The existing Swan compressor is currently being replaced with a 15 hp compressor to supply the increased air demands. It is expected that these improvements will be completed by the fall of 1988.

Also present in Area III, southwest and down-slope of the buried tanks along the boundary of the OII site, is a shallow french drain system which leads to a 36-inch diameter unlined gravel sump approximately 20 feet deep. Leachate which collects in this sump is pumped to one of the buried steel tanks by 2 air lift pumps set at 15 and 20 foot depths. Compressed air for the pumps is supplied by the airdike positive displacement reciprocating compressors.

I.2.4 Area IV Collection. The main leachate collection system in Area IV< located on the western boundary of the site, consists of shallow gravel trenches leading to a main trench which feeds a gravel-filled, unlined, 36-inch diameter sump approximately 60 feet deep. Two long shallow trenches, one which runs along the western side of the site and the other which runs along the northwest, drain to the main gravel trench.

The sump contains 3 vertical 6-inch perforated PVC casings. Two of the casings contain air lift pumps at 10 feet and 35 feet below grade. The third casing does not contain a pump. Operating air for the airlift pumps is currently supplied by the airdike positive displacement reciprocating compressors. Collected leachate is pumped directly to the above-ground leachate storage tanks also located in Area IV.

Design plans and specifications are currently being developed for a 40-feet deep concrete wet well and pneumatic ejector pump to replace the existing sump. Air to operate the pump will be supplied by a new compressor which will be dedicated to future pumping needs of Area IV and V. It is expected that these improvements will be completed by the fall of 1988.

Four inactive extraction wells also exist in Area IV. Details of the wells and their conditions are not available, although their casing sizes are 10", 10", 10", and 8". Preliminary investigation has indicated the presence of an unconnected air lift pump in one well although the depth and condition of the pump are unknown. All 4 wells reportedly contained an oily liquid.

I.2.5 Area V Collection. The leachate collection system in Area V, located in the northwestern portion of the southern parcel of the landfill, is similar to the system in Area I. It consists of shallow gravel trenches containing perforated 4-inch PVC collection pipes leading to 2 cased (10-inch casing) leachate disposal borings drilled into refuse at depths of nearly 100 feet. No active pumping of leachate is currently conducted in Area V. It is believed that leachate seeps reported in this area in the past occurred due to the stockpiling of dirt, which caused compression of landfill material up-slope of seep areas and subsequent reduction of liquid holding capacity. When the burden material was removed, the leachate seeps disappeared. Recent investigations indicate the presence of an air lift pump in one well. This air lift pump is not currently operating and the condition of this pump and depth in the well are not known at this time. One well was reported to contain 75 feet of oily liquid. There have been no recent seeps reported in Area V.

I.2.6 On-site Storage. The above-ground leachate storage tanks are located in Area IV west of the access road. Total above-ground storage currently consists of 5 rented 20,000 gallon tanks. The tanks are surrounded by an earthen berm and underlain by a buried membrane liner. Leachate, condensate from the perimeter flare station, and other liquids from the remedial investigation activities are stored here until removal for off-site treatment/disposal.

I.3 Landscaping/Irrigation. There are currently 3 irrigation systems on-site. No irrigation lines exist on the north parcel or on the top deck of the landfill. Water to all systems is fed from an electrically driven supply pump located in a compound just east of the compressor station/auxiliary flare station. The general location of these system s is indicated on Figure I.5

I.3.1 OII System. OII installed a manually-operated irrigation system on the south, east, and north sides of the landfill. Few details are available on the system or current operation.

Operation of this system is currently the responsibility of OII. Coordination is required between the SCM contractor and OII personnel to ensure that the manually operated supply pump is active during the time that the automatic systems will be operating.

1.3.2 Toe Buttress System and Northwest Slope System. The SCM contractor currently operates only the toe buttress and northwest slopes systems installed by EPA. These are both automatically operated by locally mounted control boxes, at which watering start and stop times can be adjusted.

1.4 PASSIVE CONTROL SYSTEMS.

1.4.1 Stormwater/Erosion Control. Stormwater runoff is routed via a network of V-ditches of down drains. There are 4 down drains which convey surface water from the landfill top deck and benches to existing storm sewer channels and natural channels off-site. The down drains consist of corrugated pipe placed at a slope to allow natural flow by gravity. The locations of these down drains are indicated in Figure 1.6

Approximately 16,500 linear feet of concrete drainage swale or V-ditch drains 3 of the terrace roadways (or benches). The ditches have experienced significant subsidence in some areas and require frequent maintenance to achieve adequate drainage control.

Interim drainage improvements to the top deck of the landfill include placement of additional fill to maintain critical flowlines, repair of inlet structure to Line A, replacement of Line A, and construction of clay V-ditches. It is expected that these improvements will be completed by the fall of 1988.

1.4.2 Site Access and Security. The following support facilities and equipment serve a security function at the OII site:

1.4.2.1 Access Roads. The site roadway system connects all portions of the site to a single north parcel entrance as indicated in Figure 1.7 Bench roads, on the slopes of the fill, remain from the various lifts that were constructed during the landfilling operation and are often referenced by their original MSL elevation. The Greenwood and Westmoreland extensions derive their name from a proposed plan of the City of Monterey Park to extend the existing avenues along these routes.

All road surfaces are dirt except for short paved sections of the flare stations access road and a portion of Westmoreland extension on the grade up to the top deck.

Bench roadways are narrow and require care when driving especially under wet conditions. Many roadways may become impassable, even to four-wheel drive vehicles, during the rainy season. Access to the main perimeter and interior flare stations and trailer compounds however, is fairly good under these conditions, even to passenger vehicles. Bench roads are often too narrow to allow safe turnarounds, and passing may be difficult in places.

1.4.2.2 Perimeter Fencing. Fencing of varying height (approximately 6 to 8 feet) and construction encircles the perimeter of the site. Fencing is sufficient to preclude vehicle access and most foot traffic; however, it is mainly of untopped chain link and therefore can be climbed relatively easily. Permanently locked gates exist in several places along the perimeter fence line and can be

utilized if necessary to provide access the site for foot traffic or heavy equipment. These gateways are not suitable for passenger cars. Inside the perimeter fence, fencing topped with barbed wire and/or razor ribbon surrounds the three flare stations, the trailer compound, and the meterological station.

1.4.2.3 Gate Security Office. An EPA-owned 6'x8' office trailer is presently located at the Greenwood Avenue access gate. The trailer has electrical service, but no water, sewer, or telephone service. The trailer is equipped with an air conditioner.

1.4.2.4 Security Lighting. Security floodlights exist in the trailer compound, at the interior and the main perimeter flare stations, and at the decontamination pad.

1.4.2.5 Utilities and Support Facilities. Power, water, phone, and sewer connections currently exist on the south parcel. Additional information on these services, and other site support facilities are presented in Section: Utilities and On-Site Facilities.

1.4.2.6 Entrance Gate. Access to the south parcel of the landfill is through the main Greenwood Avenue gate located on the north parcel.

1.5 MONITORING.

The general location of monitoring points is identified on Figure 1.8

1.5.1 Probes.

Perimeter Probes. Probes were installed by OII around the perimeter of the south parcel. These probes were intended to monitor landfill gas migration across the site boundary and were therefore placed primarily in native soil outside the refuse fill area. Probes are constructed of PVC pipe and polyethylene tubing, and are numbered 1A through 32 for a total of 55 probe locations. Many probes are screened at multiple depths, generally 5, 15, 25, 35, and 45 feet, but some have less than 5 screened depths and 17 have only a single depth.

Off-site Probes. Twenty-seven multiple-depth probes were installed by the California Waste Management Board (CMWB) in the residential areas south of the south parcel. The probes are similar to the perimeter probes, have multiple depths between 5.5 and 49 feet, and are numbered 1 through 11A. These probes are used to monitor the migration of landfill gas into the residential neighborhoods.

North Parcel probes. Fifteen probes were installed at a single shallow depth on the north parcel by OII. These probes were meant to indicate the presence of landfill gas in the filled area of the north parcel, which has no gas control systems. Probes are number N-1 through N-15; probes 3, 4, 12, 13, and 15 have been destroyed or lost and are no longer monitored.

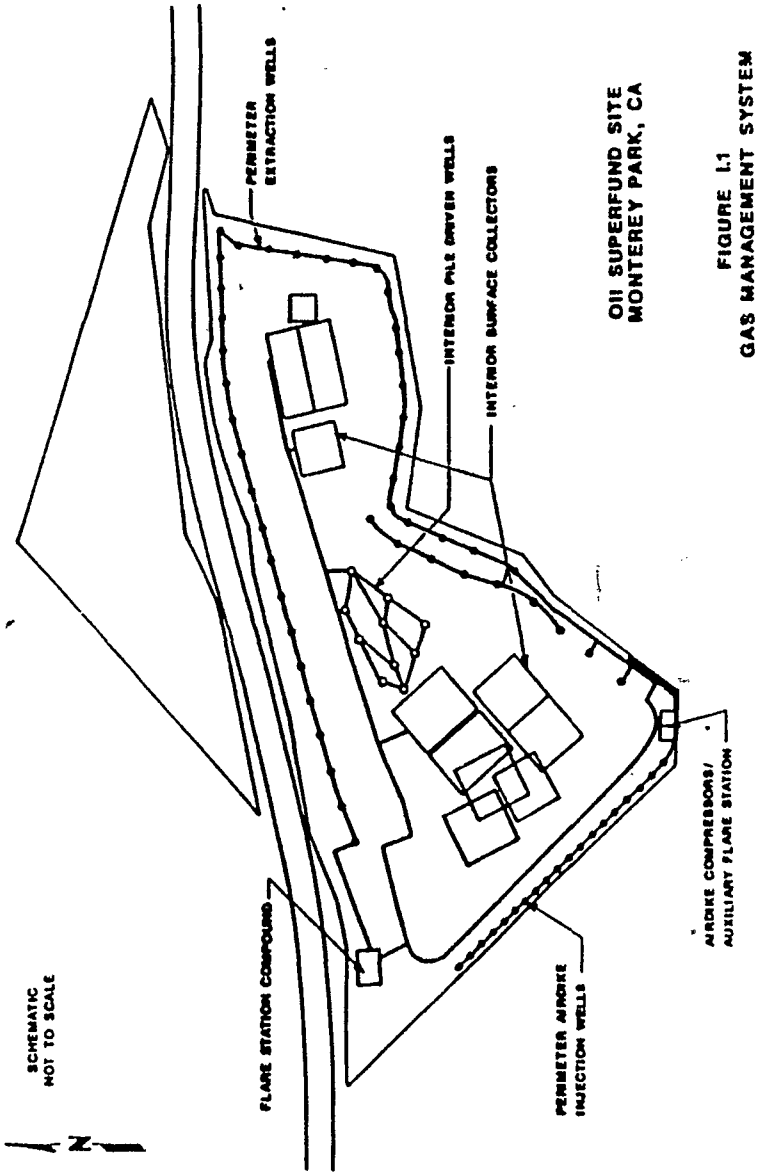
1.5.2 Wells.

Landfill Gas Monitoring Wells. Two sets of landfill gas monitoring probe systems, known as Gas Monitoring Wells (GMW), have been installed by EPA on the north and south parcels. Each well contains from 2 to 6 probes at different depths. The north parcel contains 13 of these wells with probe depths ranging from 20 to 120 feet. There are 15 south parcel wells designated with probe depths ranging from 20 to 340 feet.

I.5.3 Water Meter Boxes. Also in the neighborhoods to the south of the South Parcel are a number of water meter boxes that are regularly monitored As the name implies, these are vaults, mainly in the sidewalks, that contain residential water meters. Migrating landfill gases rise through the soil floor of the vaults and are held in the box by the hinged metal cover. The atmosphere of the boxes is monitored as an indication of landfill gas migration level and extent. Due to continually elevated gas levels in certain boxes, a number of the steel lids were replaced by EPA The new perforated lids may let the gases escape and prevent exposure to water company personnel.

I.5.4 Meteorological Station. The meterological station is located on the top deck of the southwest corner of the site. The following items are measured: rainfall level, solar radiation, wind velocity and direction, barometric pressure and humidity.

I.5.5 Geotechnical Instrumentation. There are 36 surface monuments mainly concentrated on steep slopes (North Slope and toe buttress). The observation are conducted by both ground and aerial surveillance on a monthly basis There are 11 inclinometers; two sets are deployed on the North Slope and the rest around the toe buttress Observations are done on a monthly basis There are 8 piezometers for liquid level monitoring. The locations are similar to those of the inclinometers



OII SUPERFUND SITE
MONTEREY PARK, CA

FIGURE I.1
GAS MANAGEMENT SYSTEM

EXISTING OII GAS MANAGEMENT SYSTEM

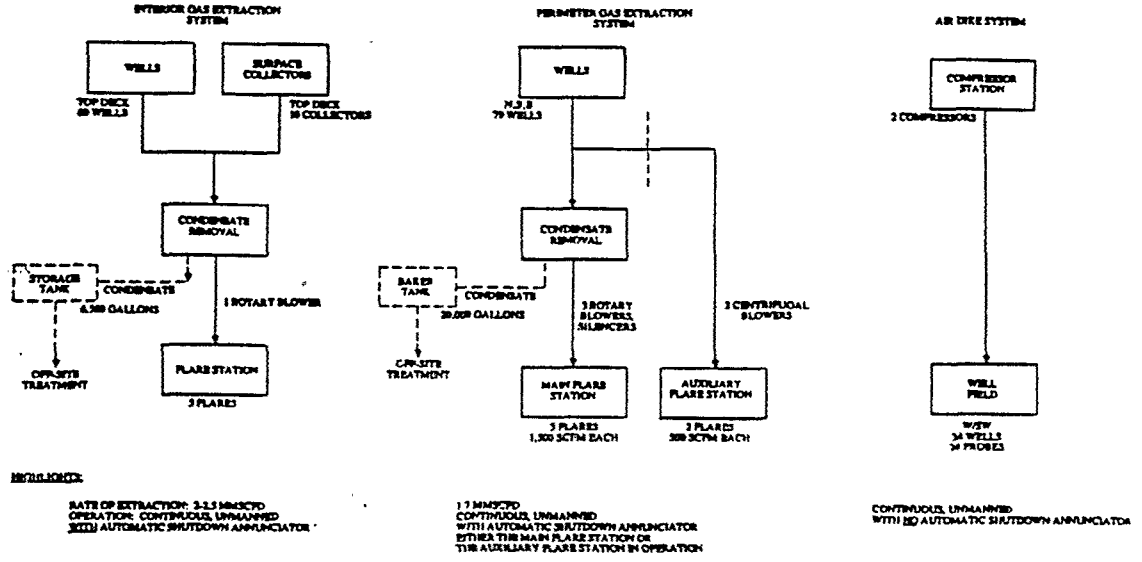


FIGURE 1.2

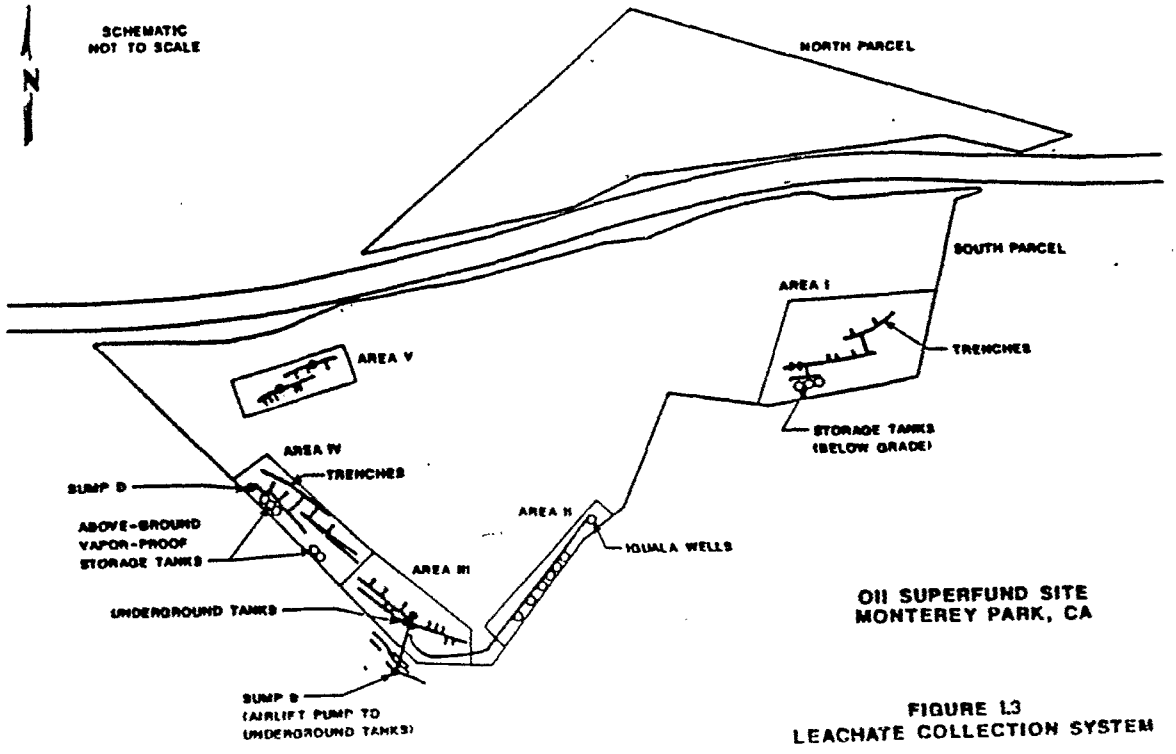
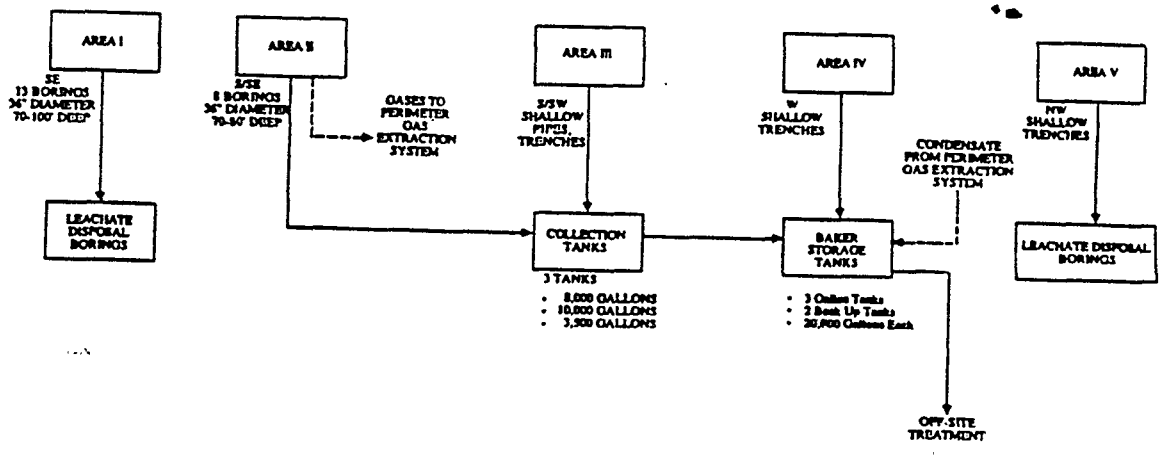


FIGURE 1.3
LEACHATE COLLECTION SYSTEM

EXISTING OII LEACHATE MANAGEMENT SYSTEM



HIGHLIGHTS:

Not Connected to the Rest of the System.
No Active Leachate Pumping.

Similar to Area I
No Active Leachate Pumping

FIGURE I.4

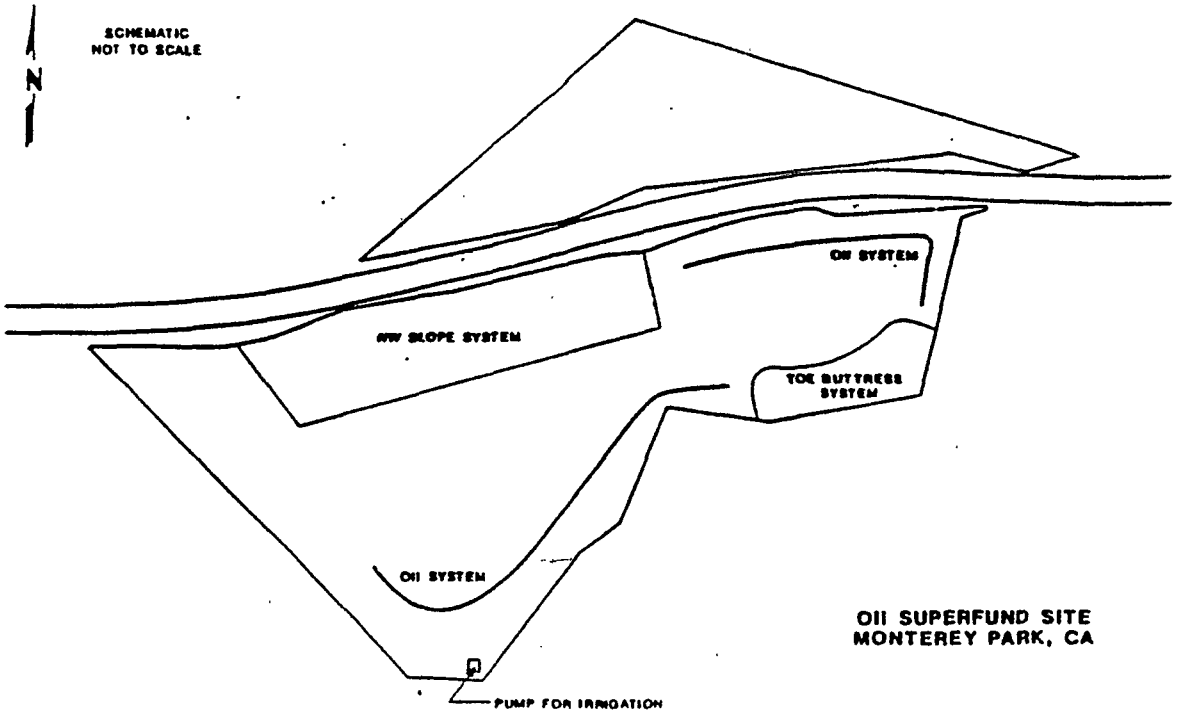


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FIGURE I.5
LANDSCAPING/IRRIGATION SYSTEM

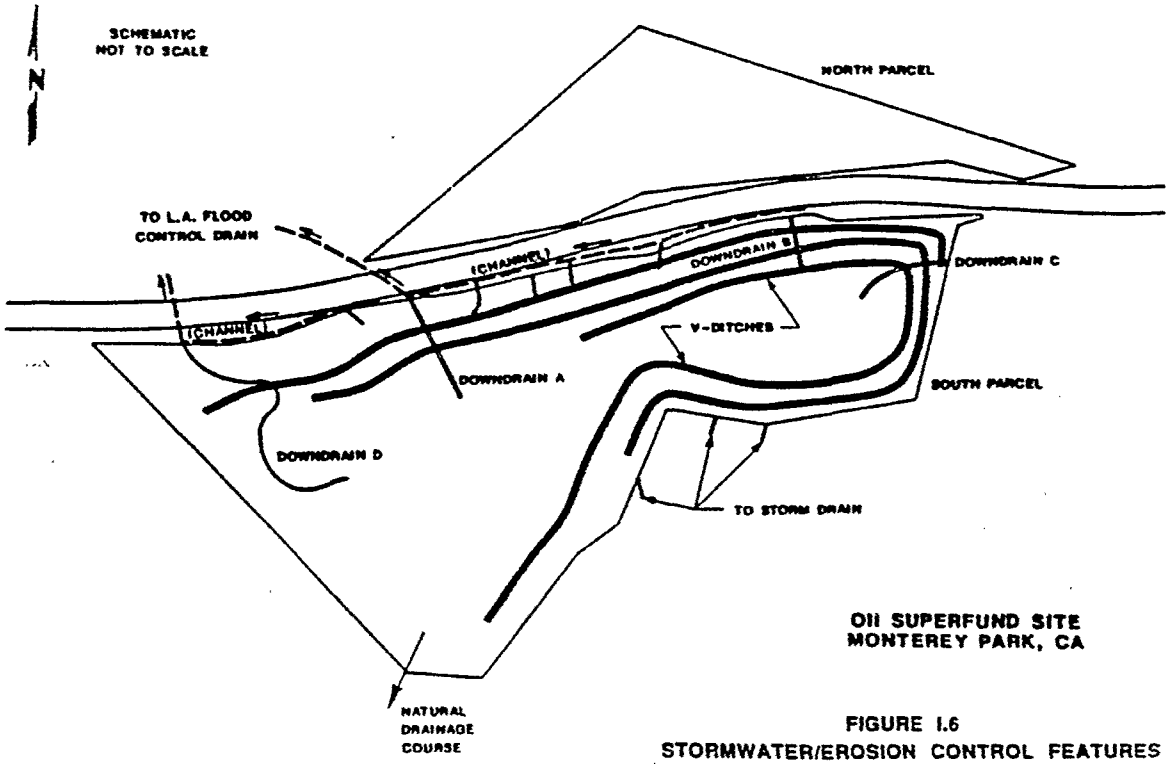

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FIGURE I.6
STORMWATER/EROSION CONTROL FEATURES

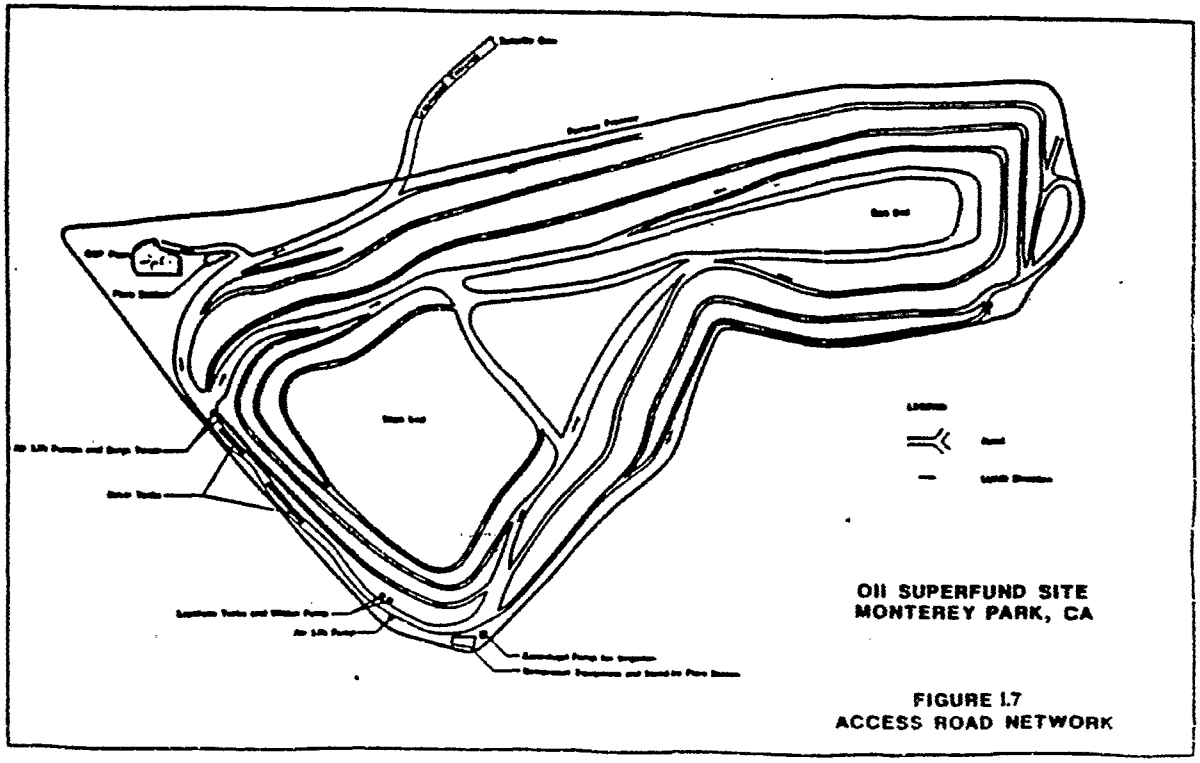

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FIGURE I.7
ACCESS ROAD NETWORK

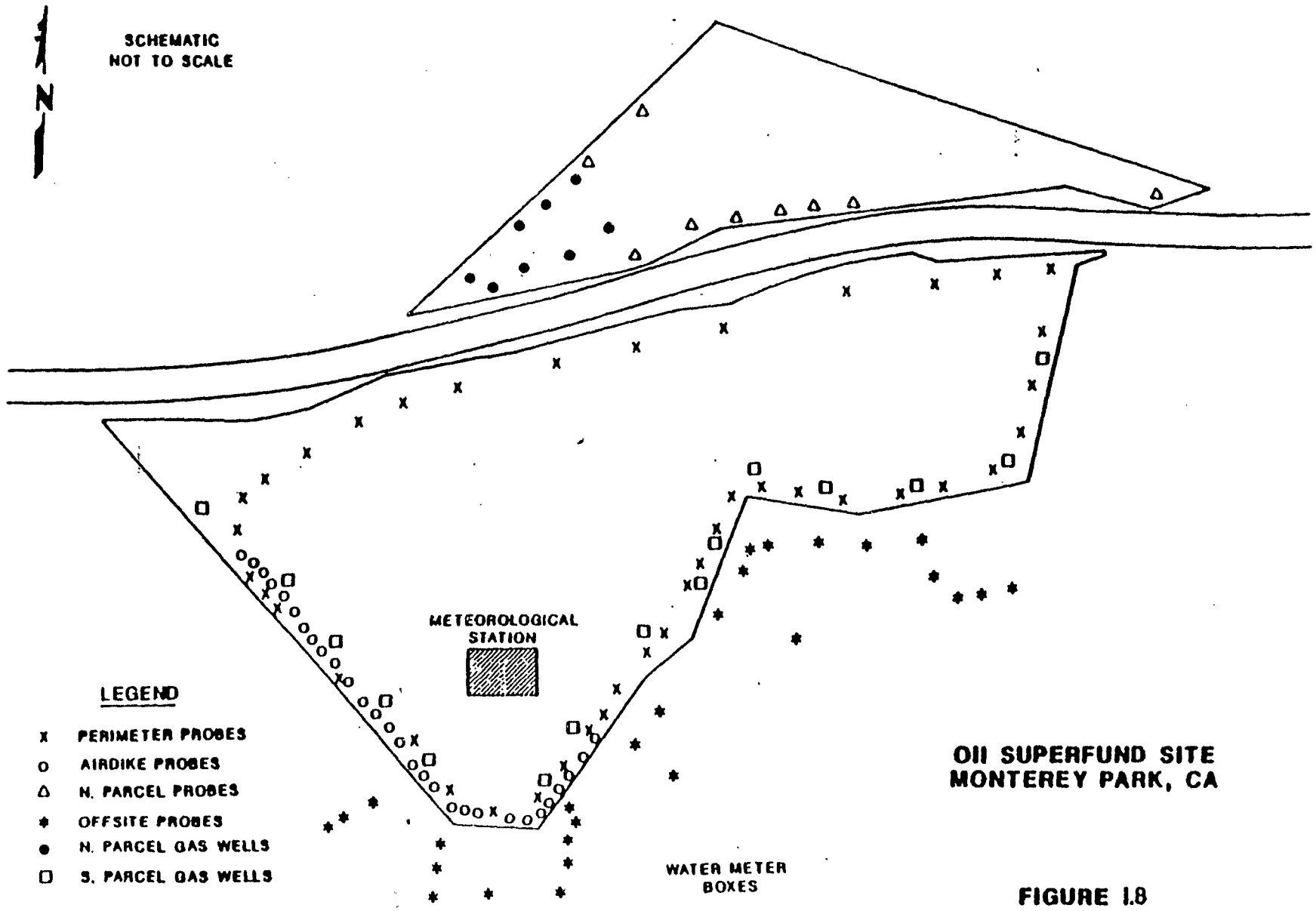

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FIGURE 1.8
PROBES AND MONITORING POINTS